

320036

JPRS 81754

13 September 1982

# USSR Report

MILITARY AFFAIRS

No. 1705

19981130 052

**FBIS**

FOREIGN BROADCAST INFORMATION SERVICE

DTIC QUALITY INSPECTED 3

10  
103  
A06

## NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

## PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

13 September 1982

# USSR REPORT MILITARY AFFAIRS

No. 1705

## CONTENTS

### ARMED FORCES

Political Workers' Role in DRA Discussed  
(A. Sgibnev; KRASNAYA ZVEZDA, 15, 17 Apr 82) ..... 1

Military Construction Units Build Kishim-Fayzabad Road  
(A. Sgibnev; KRASNAYA ZVEZDA, 1 May 82) ..... 11

### GROUND FORCES

Airborne Units: Training and Related Activities  
(KRASNAYA ZVEZDA, 5, 23 Aug 81, SOVETSKIY VOIN, Sep 81) .. 19

New Tactical Research Discussed, by V. Kostylev  
Tactical Training in Afghanistan, by V. Belozerov  
Airborne Jump Training, A. Tekerev

German Source on RPG-18 Antitank Grenade Launchers  
(MILITAERTECHNIK, No 3, 1982) ..... 21

### LOGISTICAL SERVICES AND SPECIAL TROOPS

Table of Contents: 'TYL I SNABZHENIYE', No 11, 1981  
(TYL I SNABZHENIYE SOVETSKIKH VOORUZHENNYKH SIL, Nov 81) 24

Excessive Consumption of Material Resources Discussed  
(S. Yermilov; KRASNAYA ZVEZDA, 29 Oct 81) ..... 26

### DOSAAF AND MILITARY COMMISSARIATS

Recommendations for Increasing Activity of Primary Organizations  
(SOVETSKIY PATRIOT, 2 Dec 81) ..... 29

# PERCEPTIONS, VIEWS, COMMENTS

Table of Contents of 'ZARUBEZHNOYE VOYENNOYE OBOZRENIYE', December 1981 (ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) .....	38
Comments of Activities of United States, China in Southeast Asia (A. Deyev; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) ...	40
Comments on U.S. Tank Battalion Defensive Tactics (A. Yegorov; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) ..	47
Comments on Air Defense Organization of U.S. Ground Forces (G. Dem'yanov; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) .....	54
Comments on Portable Radio Equipment of NATO Ground Forces (V. Chistyakov; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) .....	61
Comments on Western Armored Repair and Recovery Vehicles (N. Fomich; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) ..	64
Comments on U.S. Strategic Air Command Exercise 'Global Shield' (V. Pokrovskiy; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) .....	65
Comments on NATO Flight Support Radionavigation Systems (S. Borisov; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) ..	69
Comments on NATO Views About Mine Warfare in Baltic (V. Ovsyanikov; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81)	70
Comments on U.S. Submarine Logistical Support in Pacific (G. Perov; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) ....	75
Comments on U.S. Shipbuilding Capabilities (V. Grenkov; ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) .	78
Articles Published in 'FOREIGN MILITARY REVIEW' in 1981 (ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, Dec 81) .....	85

## ARMED FORCES

### POLITICAL WORKERS' ROLE IN DRA DISCUSSED

Moscow KRASNAYA ZVEZDA in Russian 15, 17 Apr 82 p 2

[Article by Col A. Sgibnev: "Comrade Political Workers"]

[15 Apr 82 p 2]

[Text] From the Afghan Notebook

"During the months since I returned home, I have had more than once to tell in the family and at the plant where I work how we were fulfilling our international duty in Afghanistan and about the courage and moral beauty of the officers and soldiers, who are receiving high government awards in peacetime for excellence demonstrated. I frequently recall with a feeling of gratitude the regimental political workers, their closeness to the people, their concern, like that of parents, and their personal example, which uplifts all the personnel. My father, a frontline soldier, said after listening to me: 'Why these are the heirs of the commissars!'" (Taken from a letter written by Sergeant (Res) I. Medvedev to the motorized riflemen of his old regiment, who are now in Afghanistan.)

I would like to say that I wholeheartedly agree with them--both with Medvedev senior and his son. It is in fact true that if the commander is rightly considered the father of the soldiers and sergeants, the political worker is their soul--of the moral solidarity of the military collective and of the warmth, of that cheerful mood which has always been directly associated with the name and rank of commissar.

I saw Sergeant (reserve) I. Medvedev's letter go from hand to hand at a conference of political workers. "These are the heirs of the commissars!"--his father's statement was perceived by those present not just as praise, not just as a recognition of distinction, but more like something offered, which has to be finished up, like an obligation not to spare oneself in the work and to seek the most effective forms and methods for indoctrinating the men.

And the comrade political workers do seek such forms and methods. And they find them.

# 1. Neither the Mountains Nor the Distances...

The helicopter hovered over the narrow site, polished by the winds, as though trying to decide whether or not to land. No, they would not land! It would be very easy to bounce off that devilish site, and the darkness was becoming denser, dissipating the glinting of the frozen snow. The soldiers, who had approached as closely as possible to the helicopter, grabbed first the mail pouch and then, off the rope ladder, Guards Major Yaroslav Grigor'yevich Ivanchenko, deputy commander for political affairs.

"Thank you, Comrade Guards Major.... Thank you!" those greeting him hastened to say.

And this was easily understood. After all, they had been isolated from the regiment for the fifth day. For the fifth day only the Hindu Kush, with its harsh look and sharp peaks, watched them in their oblivion to everything but their work, steadfast in their opposition to the "enemy" and the elements. No one grumbled about the hard bread, the missed sleep, the fact that their legs frequently felt like bricks. We are military people and we can put up with anything, but please try to understand, Comrade Guards Major, dear Yaroslav Grigor'yevich, we can't bear to be without letters, without newspapers, without the voice of our own Vizanye, our own Poltava, our own Tbilisi.... This is when Ivanchenko went on the radio to speak to the exercise director, from there to the helicopter pilots, from there.... In short, he "rustled up" the mail. He flew after it and rapidly distributed it. Just tell me who would not have shared his joy at that moment?!

Ivanchenko has other work, of course, a great deal of it. He is a good man, however. No matter how busy he is, no matter how tired, he will not forget to see that the radio news summaries from Moscow have been posted, that the letters, newspapers and magazines delivered to the subunits have not been put aside and forgotten somewhere, that messages from the plants, the institutes, the kolkhozes and sovkhoses are promptly read to the personnel.

"These messages are invaluable!" Yaroslav Grigor'yevich says. "We are constantly aware that the homeland is with us, that neither the mountains nor the distances can separate us."

Let us return to that day with which we began the article, the day when Ivanchenko flew in with the mail. The volunteer postman did not walk, they ran to their platoons and sections. And the long-awaited letter from mother appeared before the eyes of the sons. And the father's voice could be heard, muted by the distance, bringing kindness, approval, strength. And then, as though in a dream, spun of the wind and of hope, the infinitely precious words: "I love you! I am waiting for you"!

Anyone who has been in a war, in a long and cruel war, anyone who has parted for months from those near and dear because of an order, in order to go to sea, to the other end of the world, that person will understand how sacred are those minutes--the minutes of a date with a letter, of reunion with home. The intelligent

commander or political worker will never needlessly bother a soldier bent over a few lines from home. He will stand aside and listen to the joyful silence, pregnant with heartfelt warmth and sincerity.

Now, however, after the letters from home have been read, it is time to read other messages, no less anticipated and no less personal, because the signature at the bottom is "Homeland." The Soviet homeland. These letters, from plants, kolkhozes and schools, are addressed to each of the men specifically and to all of them in general. They express gratitude to them, the fighting men, inspire and elevate them.

Guards Major Ivanchenko announces:

"Greetings from workers at the ZIL [Plant imeni Likhachev]. We are thrilled, they write, with the great sense of responsibility, the dignity, with which you are performing your international duty, performing the tasks assigned you by our own Communist Party, by our own Soviet Government!"

"Thank you!" the soldiers reply.

"And this letter," Ivanchenko continues, "is from Ul'yanovsk, from the Komsomol members at a garment factory. We remember you, love you and are proud of you!" "Only a few words in all," comments the political worker. "But what words! They are from the Volga, from the birthplace of Lenin, and for that reason they have special meaning...."

"Let us answer the letter from Ul'yanovsk," Guards Warrant Officer Nikolay Gandzyuk, commander of a machine gun platoon, requests.

"You? Well, why not? You have a good platoon. You yourself have been awarded the medal 'For Valor,' so you have every right to do so!"

From the looks, the smiles and the remarks the commander gets the feeling that his decision is supported by everyone: Only the very best, the most outstanding should answer letters like this. It is a right, an honor, and it is not received as a matter of one's turn. It is earned--by service performance, behavior, skill and valor. This has by common agreement become the rule in the regiment, and naturally, no one feels offended by it. Life itself has demonstrated the fact that correspondence between the subunits, kolkhoz and other worker collectives, when engaged in by both sides actively and with interest, strengthens the fighting spirit and increases the sense of responsibility of the soldiers and officers for achieving success in the service, for maintaining exemplary military order.

Just try to remain unmoved, when you are now called by the homeland through the mouths of workers in the L'vov area their plenipotentiaries in Afghanistan; now called upon the power engineers of Lithuania to serve in a manner which makes the enemies understand that the Afghan people have loyal friends in the Soviet fighting men, friends who will not abandon them in time of trouble; now presented by the children of a Leningrad school with works of art of their own creation, with

postcards bearing the single soul-piercing inscription: "Preserve peace! Defend peace!".... This is why Guards Senior Lieutenant Aleksandr Tsarev, battalion commander, and Guards Senior Lieutenant Viktor Garnik, also Guards Senior Lieutenant and the deputy commander for political affairs, would write a report in reply to the production workers of one of the oldest plants in Stavropol': "We have had these successes. Everything is going...like this. We promise you, dear comrades, that we will never let you down in any way, never betray your trust or that of the homeland. And even if no one in the battalion has ever been in Stavropol', has never met those whose names are on the letter from the plant, the production report, strong ties of fraternity and friendship exist between you and them."

"Excuse me. I'm in a hurry. We have an exercise tomorrow, and I must manage to write a letter to Saratov, to the aircraft plant," Valeriy Aleksandrovich Neverov, an experienced political worker and a restless man by nature, says to me. "I have to write...." Not just to sign his name, but actually to write, to insert a warmth of heart into the answer, so that all of the fighting men without exception can see how the nearness of the people, their trust and concern should be valued.

A few days before that, at the parade ground, Neverov had read a letter from the Saratov workers. When we were soldiers, the letter said, many of us were outside the homeland and we know what the air of the homeland, the sky over the homeland, the homeland's earth mean. We also know how difficult the soldier's work is. Difficult but honored. You have now taken your place in the legendary ranks of those who fought the Civil War, those who fought selflessly in the Great Patriotic War and liberated Europe. It is not an easy thing to inherit our fathers' immortal glory, to inherit and add to it. It is also a great honor, however, a great obligation and a matter of great satisfaction....

Tomorrow, before the exercise began, the political worker would stand on the same parade ground and read the collective answer. The address would be: City of Saratov, Aircraft Plant. This is what would be on the envelope, but the helicopter pilots would deliver it as though to all the Soviet people--familiar and unknown--to the entire homeland, to which they were answerable for their every move there in Afghanistan.

Incidentally, how did the correspondence begin? Neverov said one thing, Ivanchenko another, and Garnik yet something else. They all underscored with conviction that the homeland's feeling is a great inspirational force. And this must not be forgotten, by neither the commander nor the political worker. It has happened, they went on to say, that draftees would arrive in Kiev from Orenburg, as an example, and dozens of officials would see to it that the new men received the local newspapers, that all sorts of evening activities were devoted to their native parts, that the ties of sponsorship did not weaken. Is this not right? Of course it is!

What about now, when distances stand between home and the canvas camp? One cannot leap over the mountains, travel the kilometers, pick up the telephone when one feels sad.... This is why it is our duty, the primary duty of the political workers, to do everything possible to strengthen ties with the homeland, to enlarge them. Is the mail late? This is an emergency. Is the television set not working?



An emergency. Have some performers come through on a tour and failed to drop in and give a concert at a "site," in a small subunit? Unforgiveable! All of the political workers I met in Afghanistan underscored the fact that they were refused nothing by the superior political organs, the headquarters or the rear service. This means that we ourselves need to work more vigorously. The return will then be far more perceptible.

I was shown a plan made up in a motorized rifle unit, which covered preparations for the 60th anniversary of the founding of the USSR. The commander has it, as does the chief of staff and the party committee and naturally, the deputy commander for political affairs. The plan is under strict control, first of all. In the second place, just look at how the number of workers committed to implementing it has grown! Take this project, as an example: "Absentee Trips to the Union Soviet Republics." Party leaders of krays and oblasts, republic Gosplans and artistic organizations are all helping to prepare them. They all responded to the regiment's request. They all helped by providing facts and figures, photographic illustrations, speeches by prominent people and magnetic tape recordings.

...The homeland is always with them, the Soviet fighting men. Therein lies their happiness. Therein lies their strength....

[17 Apr 82 p 2]

## 2. The Strength of Unity

"Dear Nikolay Aleksandrovich! It gives us enormous happiness to report to you that your son Viktor has been awarded the Order of the Red Star for valor and military skill. You, a frontline soldier and a regular officer who gave dozens of years to army service, know what a great honor it is to be the holder of an order, to be singled out by the beloved homeland...."

Nikolay Aleksandrovich Revnev lives a long way from here, from this small motorized rifle garrison surrounded by the Hindu Kush mountains, in which his son, Captain Viktor Revnev, commands a company. The father naturally misses his son and worries about him. "Think what a joyful day you gave me, comrades. I will never forget it!" is what Nikolay Aleksandrovich wrote the regimental commander and his deputy for political affairs, when they informed him with warmth and friendliness that the subunit commanded by Revnev junior had won first place, based on the results of the training year. Now, as you can see, the commander and his deputy for political affairs were quick to congratulate the father on his son's winning the award. Congratulate and express gratitude, because the father had contributed to the son's success. Congratulate and extend a heartfelt army thanks to the old fighting man for the fact that he had left a reliable replacement in the ranks when he was discharged into the reserve.

The deputy regimental commander for political affairs keeps hundreds of memorable notes in his pocket notebook--something on the order of the outlines of a personal plan for a month, a 6-month period, a year in advance: one of the officers has a birthday (don't forget to congratulate him); someone has been recommended for

promotion (find out what is holding it up); the parents of another are celebrating their silver wedding anniversary. And the political worker cannot forget in all the activity to give some attention to the individual, when his heart is singing, when he feels that he is the happiest man on earth. His granddad, a commissar in the Civil War and during the beginning of the Great Patriotic War, mentioned more than once in his talks with his grandson, the warmth and sincerity, as though for a member of one's own family, they had done all of this in the trenches, during brief halts, frequently a minute away from combat.... It is good that today's political workers have predecessors never to be forgotten!

"Here, take a look at the answers to some letters," I was told by the deputy regimental commander for political affairs.

I opened up the folder carefully preserved by the men I was talking to. On the envelopes were the names of many of our country's cities and villages. I read the words carefully, listening closely to the voices therein--young and old, filled with fervent interest in everything pertaining to the lives and activities of their sons, brothers and husbands. I automatically thought to myself: What a truly powerful store of additional ammunition our army has!

"I am with you in all my thoughts, with my whole being!" stated a letter written to the regiment by Alinazar Dzhumbayev, a participant in the Battle of Stalingrad and the storming of Berlin, holder of the orders of the Patriotic War, first degree, and the Red Star. It seems that it is not just Alinazar's son Anvar, senior lieutenant, commander of a company and communist, awarded the medal "For Valor," who is in the regiment, on the regimental roster, on an international assignment, but his father as well, tested by fire and with an enormous amount of fighting spirit.

Senior Lieutenant Anvar Dzhumbayev is a Tajik. The parents of Senior Lieutenant Nikolay Stepanov, Gennadiy Vasil'yevich and Zoya Mikhaylovna, are Russians; the parents of soldier Durdy Durdyev, Bayram and Kurban-gezel', are Turkmen; the parents of Private Konstantin Shipko, Stanislav Karpovich and Galina Yur'yevna, are Ukrainians.... They all wrote the regiment and are united in their understanding and approval of the international duty which has fallen to the lot of their sons. During this year of the 60th anniversary of the founding of the USSR their words have an especially patriotic and uplifting ring.

"The names of the foreign mercenaries bludgeoning their way around other people's lands have been and will be in disgrace, accursed. Your bright and noble names, though, will remain deep in the Afghan memory, remain there forever!"--these words were taken from a message from the parents of Senior Lieutenant Vladimir Vakulin, holder of the Orders of the Red Banner and the Red Star, to their son's fellow soldiers in the regiment.

And the political workers did the correct thing, very correct, when they opened an evening dedicated to the families of the fighting men, families who are ever in their hearts, with this fervent appeal, with these lofty words. The letters became vocal. The photographs came to life. Into the tent, as though drawing it apart like a curtain, into the depth of our common Soviet joy, our common concern, our

common, uniting sense of responsibility for everything. In an hour or so a soldier would assume his post, and the warmth generated by the lines from home, the calmness produced by the knowledge that everything was well there, everything was the way it should be, would go along with him. When the next hypothetical problem roused the lieutenant and the captain, they would not be alone when they set out to perform the assignment. Love, distant and nearby, would accompany them, the shoulder of friendship would be alongside them, the shoulder of moral support given many times before.

The military man, of course, must be prepared to be separated from his family, his home, at any time. This is a specific feature of military service, a specific feature of military duty. And when that time comes, both he and his family must understand: This is the way it has to be! A military man cannot afford to see any drama in the fact that he has been separated from his family. He cannot afford to let his desire, perfectly understandable, to be with his family overshadow his sense of duty. The wife should do everything possible to help her husband bear the hardships of separation, everything possible to lift up his spirit, his mood.

"We have a strong rear area!" Guards Major Yaroslav Grigor'yevich Ivanchenko said as he continued our talk. "I include the serviceman's family when I say rear area. Letters from home, from wives and children, are very dear. They help a great deal. And letters from the wives' councils are exciting. They inevitably include statements like 'Don't worry about a thing. Everything is all right with us'! We also thank the wives' councils for the fact that they have arranged for the recording of family greetings. One simply turns on the tape recorder--and there in his tent hears the voice of his wife or his little daughter, a report from his small son saying that he has improved his grades, that his report card now contains only 'As.' A small thing, naturally. Boasting, but it gets to one.... Although...."

Although, what, Yaroslav Grigor'yevich? All sorts of disagreements arise, he admits--usually over nothing. Complaints, for example, that the husband does not write, that he has forgotten her. I have to intervene. In such matters the political worker is like a teacher, a mentor, a friend. I read his correspondence with Svetlana Gavrilovna. She wrote six letters, tearful letters, containing unwarranted complaints.... Guards Major Ivanchenko wrote with candor: "You don't know your husband, respected Svetlana Gavrilovna. You don't know what a fine commander he is, what a fine person! Your husband was ill recently. Then, when they announced that exercises were to be held, he got on his feet at once. And you should have seen how stubbornly and persistently he made his way up the cliffs in pursuit of the 'enemy,' knowing that the soldiers will crawl and climb after him.... Don't scold him because he doesn't write often. We frequently have no time for letters.... You should have been with us on the parade ground, when your husband said farewell to the platoon, addressed the men, after serving out his tour here.... I saw tears in the eyes of the soldiers, tears of respect, of gratitude, of admiration.... And all of this was because your husband conducted himself heroically in the difficult situation, because he was always inseparable from the platoon, from them, his men...."

Then I read Svetlana Gavrilovna's letter. It was calm and joyful. She understood everything. She said thanks for everything.... She invited the political worker to visit them.

There were three signatures under the invitation: that of Svetlana Gavrilovna herself, that of her husband who had returned home, and of their little son.

I would advise you not to refuse the invitation, Yaroslav Grigor'yevich. Go to visit them....

### 3. More Precious Than Gold

"How does the political worker acquire prestige"?

When I addressed this question to Major Vladimir Akhrangel'skiy, holder of the Order of the Red Banner, who recently departed for an interior district and a promotion, he answered with certainty:

"The usual way.... One has to work a little harder than the others, to think a little less about oneself. Most importantly, the men must feel a little stronger, a little more confident when they are with you."

A year ago Guards Senior Lieutenant Viktor Garnik would not have answered this question intelligibly. He had only ideas derived from books--about prestige, about the political worker's first steps. And this was not his fault. Nor was it the fault of the school. Life is more complex than any kind of diagrams. Life teaches its lessons sternly and demands full measure.

"I thought that I could handle the task with lectures alone," Viktor mused, "with visual agitation and performances by amateur groups. Here, in these special and difficult circumstances, I understood that the ability to find the right approach to an individual, the ability to help him, is valued above all else.... And the personal example, of course. The example in the field, in maintaining regulation order, in establishing living conditions, in creating a wholesome atmosphere."

The year went by like a single day. Viktor Garnik "ingrained" himself into the battalion to the extent that it was difficult to imagine either a battalion formation or the battalion's affairs without him. He thanks his lucky stars for the battalion commander under whom he serves as deputy: Guards Senior Lieutenant Aleksandr Tsarev has something worth learning. His attitude to the military work and his respect for his subordinates. Viktor recalls the following incident. The motorized riflemen were once cut off by a snowfall and spent 4 days without anything to eat. Brave as they tried to appear, they were hungry. A helicopter flew in on the fifth day and dropped a sack of crackers. The warrant officer hurriedly passed them around. He counted wrong, though, and there was not enough for everyone. Upon seeing that the warrant officer had blundered, the battalion commander did not even frown and did not reproach him. Instead, he smiled, broke his cracker in half and handed one half to a soldier standing next to him. Garnik also shared his cracker with someone. How could they do otherwise? Tsarev took Garnik

aside, shook his hand and said: "It is a good thing it turned out this way, that we quickly thought of sharing with the soldiers. Sometimes a small piece of cracker is more precious than gold"!

Viktor changed the subject, when I asked him what he had been awarded the Order of the Red Star for. He was happy to show me the battalion's tent city, however, and told me what he and the commander had done to make the housing appear more cozy, more homelike, how they varied the food, how they had created a library on a volunteer basis, had greened up the recreation sites, despite the heat. Little trees, slender and not yet strong, but bringing indescribable joy, inviting one to come into their shade.

In other posts like that one I also saw signs of real paternal concern for the lives and leisure of the fighting men. And most pleasing of all--the political workers, like the commissars of the past, are the leaders in all these undertakings. Certain officers could learn the lesson of sincerity and sensitivity from them. It is commendable that they are also not afraid to enter into battle with equanimity, coolness and serenity. There was a case in one of the garrisons once, in which more than one television set found its way into the staff offices, into the personal tents. The party committee secretary shamed some and reminded others of party responsibility and ethics. The television screens were soon lighting up again where they belonged. In another place it was decided to convert an area designated for use by the medical service into an office. Once again, the political workers did not retreat but stood their ground. The doctors now have excellent working conditions, and the personnel can receive skilled medical aid at any time.

The battalion commanded by Guards Senior Lieutenant Aleksandr Tsarev, whom we have already met, was performing a training mission--in the mountains, in bad weather. The soldiers sank into the snow up to their waist. The wind constantly grew stronger, burning the faces of the men. Finally the order came: "Permission granted to make a halt and take a rest." Within a matter of minutes the motorized riflemen had skillfully and capably set up the tents, securing them so that the wind would not blow them over, and had fires going in the field stoves. The first sergeant of the company in which the deputy battalion commander for political affairs was located, assigned spots to the soldiers, and the latter unhurriedly stretched out in the areas assigned to them. The first sergeant offered a place next to him to the political worker:

"Here's a place for you, Comrade Guards Senior Lieutenant...."

Viktor Garnik looked around: A stove was nearby. It was cozy. With a conspiratorial smile, good naturedly, he reproached the first sergeant:

"I see you have forgotten, Comrade Guards Warrant Officer, where my favorite spot is and what I prefer...."

The political worker settled himself near the entrance, where, the soldiers knew, it was less comfortable and windier. They knew something else as well, however: Political workers most frequently do just this sort of thing.

And now, a year later, should Guards Senior Lieutenant Garnik be asked how prestige comes to the political worker, Viktor Nikolayevich could answer anyone as well as Major Akhrangel'skiy had.

Leonid Il'ich Brezhnev's fervent words about the frontline political workers are planted deep in the heart of each of us. The personnel always gathered around them. They always knew the moods, the needs, the hopes and the dreams of the personnel, and led them to perform self-sacrificing acts, to perform feats.

The political workers of the 1980's are much the same as those party fighters singed by the flames of war.

I am glad that I got to know them in Afghanistan....

11499  
CSO: 1801

## ARMED FORCES

### MILITARY CONSTRUCTION UNITS BUILD KISHIM-FAYZABAD ROAD

Moscow KRASNAYA ZVEZDA in Russian 1 May 82 p 2

[Article by Col A. Sgibnev, Kabul-Moscow: "And There Was the Rattle of Gunfire Next to Them"]

[Text] "International solidarity of the workers is not an abstract concept, not simply a motto, for us Soviet people. It is our very life, our preparedness to come to the aid of our class brothers. Tens of thousands of Soviet specialists are working selflessly at construction sites in the countries of Asia and Africa, in industry and in agriculture, in hospital and educational institutions. They are representing their great socialist homeland in a worthy manner." (From a speech delivered by Engineer-Colonel V. Kelpsh at an Afghan-Soviet friendship meeting on the occasion of the opening of the Kishim-Fayzabad Highway.)

That day was perhaps one of very few days during the long months, during which there was quiet undisturbed by enemy fire. The huge rocky square where hundreds of the local residents were gathered had never known such festive, human animation. Nor had the mountains, although countless centuries and generations had come and gone within their view.

"No other words," Gulam Dahamal', a teacher, declared at the meeting, "are uttered among the Afghan people more frequently than the words 'road' and 'water.' This is because roads and water are life. They are prosperity. They are joy. And you who have created this road will always be with us, in our hearts, in our gratitude...."

Valentin Valentinovich Kelpsh could not conceal his happiness, of course. It came not from just the words uttered with such great warmth, nor with the smiles which brightened the faces there. The most important thing was the fact that the road, already called the Road of Friendship, would serve a people liberated by revolution. The main thing was the fact that a Soviet person, a person in epaulets, would leave behind yet another demonstration of humanism, of selflessness and nobility. In a few minutes the meeting would end, the road of labor would grow noisy beneath the

wheels of vehicles, and he would be remembered more than once as a friend, as a brother, an envoy from a new world.

This was not the first road in the army career of Valentin Valentinovich Kelpsh, officer and communist. There had been longer ones, larger ones, but never before, when one looked back over his years of service, had the target dates been so rigid as here, on the Kishim-Fayzabad route, and what is more, never before had machine gun rounds, bearers of death, burst through the rumble of peaceful construction equipment. The province of Badakhshan is a border province, and gangs of mercenaries, armed to the teeth, had slipped across the border no matter what, burned villages, hospitals and schools, brutally dealt with the party activists and in some cases, buried alive those who would not be subdued. They also destroyed the only road, in order to delay the arrival of a new life....

"So, your temporary duty assignment will not be an easy one," Kelpsh was told by the general who received him in Moscow. A map lay on the desk. On the map Badakhshan bristled with inaccessible mountain ridges. "The government of Afghanistan has come to us with an urgent request--to restore a road of vital importance, essentially to build it anew. Naturally, we could not fail to help out a neighbor. It is your duty to fly there without delay and accomplish the assignment as rapidly as possible, in the military manner. I wish you success!"

The picture he saw upon arrival destroyed all the ideas he had formed during the trip. The road surface was mutilated beyond recognition. Every meter or meter and a half were deep potholes scorched black by the dynamite. Bridges--the dushmans had not spared a single one--dangled, heavily damaged, over the precipices. At turns in the road were piles of rubble plastered with mines. In ruins stood retaining walls and cornices, hewn out of the hard rock sometime in the past.

"The enemies are trying to convince us that you want to seize Badakhshan and annex it to your Central Asia," said an old peasant who had approached the Soviet soldiers, who stood there sadly contemplating the ruins of the Tishkan bridge. The visitor willingly accepted a cigarette offered to him. His eyes grew warmer as the look of caution disappeared. "But we don't believe them. We have had enough time to learn how noble and honorable the Soviet people are...."

Pointing in the direction of some caves gaping from the slopes of nearby mountains, he warned:

"Be careful. Bandits are hiding there. They have machine guns and sniper rifles."

The old man faltered and then asked Kelpsh:

"You wouldn't happen to have some salt, would you?"

"Salt?" Valentin Valentinovich repeated in confusion.

"Yes, yes, salt, ordinary salt, even a pinch!" We learned that for 6 months the dushmans had besieged the village, which had dared to create a self-defense group.



For 6 months there had been no contact with the outside world. If anyone even approached the road, shots would ring out. "Most of all," the peasant continued, "we are desperate for salt and for kerosene. Three months ago we collected money and our elder sent a man to Fayzabad, the administrative center of the province, for everything we needed. We waited and waited for our courier, but he never came. When the snow melted, he was found, right near his house, behind a little ridge--shot through the chest--with a small sack of salt swollen from the blood. They killed another man too, damn them. He also went after salt, just recently. He left some orphaned children."

A Soviet soldier took a package of salt out of a field mess chest and handed it to the old man.

"Take it, father...."

The old man did not know how to express his gratitude. He bowed, shook hands and invited the soldiers to visit him.

Soon, with the onset of darkness, he again appeared at the military camp. He was not alone, but was accompanied by three fighters from the self-defense group: "The dushmans will sneak up on you along the river bank. Get ready"! He was very glad when he understood that the Afghan soldiers guarding the construction site had been ready for battle a long time, that their reconnaissance men were carefully watching behind every stone, carefully listening to every rustling.

The dushmans gave us no peace for several days in a row, until the Afghan commander called in helicopters by radio. The caves which the bandits used as their camp disappeared in a mass of flames and smoke. Submachine guns covered every path. Volunteers from the village, even the children, brought ammunition to the soldiers. Many of those who did not have weapons approached the Soviet bulldozer and excavator operators and went into the gravel pit: "Let me be your assistant"! Kelpsh was happy to see that helpers made themselves available everywhere, that the local residents, throwing off their centuries-old torpor, were reaching out to the light, to the truth, to revolution.

Incidentally, it was during that time when Valentin Valentinovich Kelpsh was shown a poster, from which he learned that a reward of 300,000 Afghanis had been posted for his head. Let me jump ahead and say that near Fayzabad, when the road construction had been completed, the amount had already jumped to 800,000 Afghanis.

I only mention this in passing. Kelpsh was concerned least of all about the safety of his head. He was busy working. He worked heroically. The people who had come with him worked just as hard. A bridge, for the construction of which a month would ordinarily have been allocated, was erected in 10 days. A kilometer of surfaced road appeared in half the time called for. Captain Anatoliy Cherkashin, the political worker, created a photographic record of the international construction project, and even specialists tried by the Great Patriotic War were unanimous in their praise, when they looked over the photographs: "A real feat is recorded here"! Here we see Lieutenant Aleksandr Shevchuk at the controls of an excavator.

A platoon commander, he is showing the young soldiers that neither the 40-degree heat nor the abyss nearby can interfere with the job. Aleksandr returned to the homeland with the medal "For Combat Merit" and with the third star on his epaulets, received ahead of schedule. Here we see demolition specialists wielding drills at an alpine altitude, secured by straps. In front of them is granite, solid granite, and their advance is therefore measured not in meters but in centimeters. Here in a group photograph are some officers, about whom there is a very, very interesting story. In the foreground are Captains A. Rudenko and V. Danin and Major A. Kachanov. Behind them are Senior Lieutenant N. Toverdovskiy and S. Gorbunov and Lieutenants R. Ibragimov and D. Lys. The officers are smiling. One has the feeling that they are satisfied with themselves and with their work. "But what about the story?" I asked Kelpsh. He told me about it, not concealing his pride in the people who had served under him:

"The section of road where Anatoliy Cherkashin photographed his friends as a memento was accepted from us with an 'excellent' rating. This was a difficult section. The dushmans had destroyed everything there, including the roadbed, and we had to build a detour, wasting time and effort. The road turned out better than the old one, to be sure, but.... 'But there's a detour! A detour which takes up an hour of time!' lamented Rudenko and Kachanov and all the others.... No, we will redo it!" they decided.

And they did! In the photograph which Valentin Valentinovich Kelpsh showed me one could see a semi-tunnel structure, out of which a straight and well-worn roadbed emerged.

"You people are strange," said the Afghans who came to take over that section of road in its new state. "Strange and... wonderful"!

In one reference book on Afghanistan I read the following: "Of the country's present 2,800 kilometers of roads covered with bituminous concrete, more than 1,500 kilometers were built with the assistance of the USSR." Judging from the date on which the reference was signed to press, it did not include 110 kilometers presented to the fraternal people by the "strange and... wonderful" fellows from the Soviet Army's Engineer Troops, for whom the terms international duty and international solidarity are not abstract concepts, not simply slogans. They are our very life. Our Soviet, socialist life....

11499  
CSO: 1801

## GROUND FORCES

### AIRBORNE UNITS: TRAINING AND RELATED ACTIVITIES

#### New Tactical Research Discussed

Moscow KRASNAYA ZVEZDA in Russian 5 Aug 81 p 2

[Article by Lieutenant General V. Kostylev, deputy commander of airborne troops for combat training and military educational institutions: "Searching in an exercise, Troop Field Training"]

[Text] Just as is true of branches of the service, the process of airborne troop combat training sees a great deal of attention given to a search for new tactical methods and procedures and to conducting studies in the course of combat exercises. But as practical experience has shown, this is a difficult task, one requiring from a commander and his staff officers professional knowledge, creativity and initiative. I would like for KRASNAYA ZVEZDA to discuss this in one of its articles.

(From a statement by Guards Major N. Bykov at a readers' conference.)

The height of summer combat training sees reports coming in to airborne troop headquarters from the various formations (soyedineniye) and units (chast') about the test exercises and tactical training with field fire and practice airborne assault involving men and equipment under way. In analyzing them we ask ourselves the question: what that is new have participants, both men and officers, learned in the course of their airborne assault, tactical fire and special training?

Searching in an exercise...An exploratory, investigative approach and innovation in field training are today more important than ever before. Improving the tactics of unit and subunit operations and looking for ways more fully to exploit the combat capabilities built into weapons and equipment--these constitute the primary direction of the work uniting the efforts of commanders, staff personnel, political organs and party organizations.

We are aware, for example, of how great are the role and importance of the maneuver under present-day conditions. This is due to the very nature of combined-arms combat--its great dynamism, increased spatial extent and the swiftness of the attacks. Having a substantial impact upon operational tactics have been the assault combat vehicles and other first-rate equipment with which our troops have been provided. As practical

experience has shown, maneuver success in mountainous terrain, for example, would be inconceivable today without effective cooperation with the artillery and fire-support helicopters which frequently operate in support of assault operations.

Searches in this direction are continuously under way in, among other organizations, subunits of X Airborne Regiment. In working to improve tactics employed in their mountain operations, these assault troops will in one instance attack the "enemy" from the march, while in another they will avoid contact and bypass him in order to launch a swift surprise attack on him from the rear. Commando operations, mixed mine fields, raids and ambushes are also extensively employed.

Guards Major A. Rembez, commander of a leading battalion, Guards Major V. Khromov, acting battalion commander and others made a number of suggestions for improving operational tactics. In the course of exercises they had conducted in the mountains they had discovered optimum variants of the organization of march formations for subunits executing marches in mountainous terrain and found a way to improve means of communication for efficient and continuous troops control during a mission.

A group of airborne staff officers working in this regiment headed by the chief of the troop combat training department, Major General A. Spirinyy, carefully studied the experience of these leading commanders. It has now been analyzed and generalized and is being introduced into operational practice.

We could cite no few examples like this. Instructive in this connection is the battalion exercise involving an assault landing and field fire conducted by Guards Lieutenant Colonel Yu. Mikhaylovskiy. The concept of the exercise called for the battalion to be detached to operate separately from the main assault force. During this exercise the director had decided to study a number of practical questions. They included the following: more precise determination of the combat capabilities of a battalion operating in the "enemy" rear with the prescribed reserves of ammunition and rations air-dropped in to it; the time required to establish company-battalion communications following the landing and the time necessary to assemble at the designated site and then for battalion subunits to engage the enemy.

A study group composed of the most highly trained officers of a variety of specialties had been formed for this purpose prior to the beginning of the exercise. They undertook a careful study of the theory involved and the latest recommendations concerning the questions under study. Exercise participants were issued mission forms for tasks, questions and methods of study. This made it possible to involve a large number of people in the study.

The investigative approach to questions concerning combat training fully justified itself on this exercise and yielded positive results. Analysis of the material collected during the exercise made it possible to determine more precisely the periods of time for which a battalion supplied by air drop at the authorized level can conduct active combat operations independently. It had also been possible to solve a number of practical problems and to prepare specific recommendations for reducing the time required to tie down equipment, load personnel on aircraft, drop supplies by cargo parachute and engage the enemy after landing.

Materials generalized by Guards Lieutenant Colonel Mikhaylovskiy received a high evaluation at airborne headquarters and will, of course, find practical troop-training application.

While the innovative approach is becoming to an ever increasing degree characteristic of division- and regiment-scale exercises, it has so far been slow to establish itself at such echelons as the battalion and company. What is to account for this?

Analysis of company exercises with field firing recently conducted by the airborne staff in a number of units revealed that many of them had been prepared only hastily, so they were naturally not very effective. Our attention is also drawn to the fact that neither the battalion commanders directing these exercises nor the staffs of the units involved assigned tasks of an investigative nature in the course of the exercises in the apparent belief that an exercise like this was no place for experiments. Hence the routineness of the plans and concepts and the repetition of one and the same tactical and target situation.

I would like to stress the role of our staffs in this connection. Their responsibility here is to insure that regardless of the scale and objectives involved, each exercise should be different from the preceding one and should add something new.

In other staff organizations, unfortunately, the new and the innovative are frequently taken up with an exaggerated caution: when we get a directive from higher headquarters, they'll say, then we'll introduce the innovation and study it. We cannot reconcile ourselves with these situations.

We should also keep in mind the fact that the most precise criterion of any search effort is the end result. If there has in fact been success and progress, the risk and material expenditures involved have been justified. Otherwise we have only the semblance of initiative. Some commanders, for example, will with little or no thought or planning undertake the construction of what would appear to be effective training facilities and then fill them up with a lot of material and equipment. But they forget to really weigh this efficiency.

A couple of years or so ago, for example, one of our units put up an aerodynamic catapult designed to improve its airborne training program. The new training device made an impression in demonstration exercises: by means of a powerful stream of air generated by an aircraft engine it carried a paratrooper with his parachute open upward, and he then floated smoothly back to the ground. Somebody had actually already laid plans to replace the existing parachute towers with this trainer. But then the questions arose: how much greater economies will this trainer yield, will it be safe to operate? As it in fact turned out, the introduction of this device would not have come cheaply, it would have been difficult to operate and, what was most important, it would have made no substantial improvement in airborne training. So they had to give up on this trainer. We resolutely oppose such pointless expenditures of manpower and resources.

In looking at this searching process, we cannot go without touching upon another of its aspects: investigative studies in the realm of combat training would be inconceivable without taking past front-line experience into account. Moreover, without studying this experience, no innovation in the tactics associated with mastering modern-day weapons and the methods of employing them in combat can be effective.

I will cite an example. In the course of a tactical mountain exercise, battalion commander Guards Major A. Aliyev encountered this problem. In the course of the battle, particularly in executing their maneuvers, subunits operating in infantry combat vehicles were critically in need of mortar support to cover what are referred to as the

dead spaces. "What if we were to mount a mortar directly on the body of an APC?" the battalion commander wondered. Ever since his days as a cadet when he had studied the history of the Great Patriotic War in the academy he had remembered that during the battle of Stalingrad our troops made extensive use of "wandering mortars," which were mounted in vehicle bodies. This then gave him the idea of mounting a mortar on an infantry combat vehicle. He tried a number of experiments. The result was favorable. This innovation has now been adopted in more than this one battalion.

To be an innovator and an experimenter in one's work--this has become a most important characteristic of today's mode of operation. Delegates to the 26th CPSU Congress heard this quality ranked with competence, discipline, initiative and efficiency as characterizing the makeup of today's leader. The party's requirements apply fully as well to our military cadres.

The concluding phase of our summer training will without doubt be marked by a continuing search and new studies and experiments. This direction in the work of airborne commanders and staff and political personnel is considered one of the most decisive in the effort to improve the quality and effectiveness of combat training and to further increase combat readiness.

#### Tactical Training in Afghanistan

Moscow KRASNAYA ZVEZDA in Russian 23 Aug 81 p 1

[Article by Captain V. Belozerov: "Under Mortar Cover"]

[Text] High levels of stress and exertion characterize the duty-day activities of troops of the airborne subunits making up the limited contingent of Soviet forces in Afghanistan. Each training exercise, each drill sees them operating under conditions approximating to the maximum possible degree those of actual combat. Such was the case in this instance.

The tactical situation in the exercise area was a difficult one. The airborne battalion under the command of Guards Capt. S. Kozlov had executed a march over unfamiliar desert terrain with the mission of preventing the "enemy" from consolidating his position along an advantageous line. The assault troops were already close to their objective. But at that point an "afghanets" suddenly came up. Stirring up clouds of hot sand, the wind whipped along loose clumps of camel's thorn, saxaul.... The dark blue of the distant sand dunes soon disappeared in a dense, unbroken haze of dust. The column came to a halt.

The elements raged for only a little while, but the battalion commander knew that over beyond the sand dunes the "enemy" was using every minute to consolidate his position to prevent the battalion from exploiting its success. The situation was complicated by the fact that the assault troops now found themselves on terrain as flat as a tabletop where it would be difficult to find concealment from "enemy" reconnaissance. It called for quick and decisive action.

Guards Captain Kozlov decided to attack the "enemy" under the cover of mortar fire. In assigning his mission to Guards Captain A. Zav'yalov, commander of the attached mortar battery, he declared with emphasis: "Great hopes ride on you...."

Guards Captain Kozlov had indeed placed great hopes on his mortarmen, counting on his battalion's thus being able to negotiate the area under fire and approach the "enemy" under the cover of their fire.

The battalion commander had no doubt whatsoever that these airborne assault mortarmen would be successful in accomplishing their mission. He had already more than once seen for himself that the more difficult the tactical situation, the more aggressive and resolute they were in action.

...The fire positions teemed with intensive preparations for combat. Crews under the command of Guards Sergeants I. Palenga and L. Nektsa were the first to report readiness to open fire. All battery crews followed in taking up their own positions. Without even looking at his watch Guards Captain Zav'yalov knew they had beat the norm time. This came as the result of drills which always involved competition between crews oriented toward both tasks and norms.

It took a few seconds to get the last-minute firing data. Then was heard the officer's command to open fire. Up ahead rose the plumes of the explosions among the sparse clumps of saltwort from which the "enemy" were firing machine guns. The mortars were right on target. This was also to be seen from the explosions solidly covering the targets as well as by the intensity of the "enemy's" fire: the bursts of machine gun fire were now coming increasingly infrequently. The "enemy" was apparently hastily changing his position.

The headquarters platoon leader, Guards Lieutenant A. Popovich, made a correction, and the mortars fired off another volley. The "enemy" had clearly not anticipated such accurate fire from these mortarmen. He tried to knock them out by simply plastering the battery positions with fire from all his weapons. But the assault troops had by that time already taken up alternative fire positions. The platoon led by Guards Lieutenant S. Alimov especially distinguished itself here. It was ahead of the others in setting up its mortars in their firing positions and opening up a barrage fire on a group of "enemy" infantry trying to outflank the battery.

The quick and effective action of this platoon came as no accident. It had been at the initiative of Alimov himself, a new officer, that on the eve of the exercise the battery had drilled on repelling attacks on its fire positions. The skills acquired in the course of this drill had without doubt shown up in the action of the mortar crews in this difficult situation.

Exploiting the results of their mortar fire, the assault troops went aggressively over to the attack. The battalion advanced successfully, in the process inflicting substantial losses upon the "enemy."

#### Airborne Jump Training

Moscow SOVETSKIY VOIN in Russian No 17, Sep 81 (signed to press 13 Aug 81) p 6

[Article by Lieutenant A. Tekerev: "Jump after Jump"]

[Text] Ever since the evening before we had been alive with excitement. Tomorrow we were going to have one more parachute jump from an aircraft. It was the focus of all our conversation, all our thoughts. How strong was the wind going to be, would it be

sunny or overcast? But now ever since morning the weather has been made to order. The first, hesitant rays of sun light up the faces of these airborne troops. We are undergoing the final check of our parachutes, after which we will move out to board our aircraft.

So now its our turn. We take our places in the cabin of the aircraft and crowd in tightly against one another. The aircraft makes a smooth turn. A short take-off run and...we're in the air. Sitting in front of me is Warrant Officer Nikolay Polishchuk; he is smiling enthusiastically, trying to buck up his comrades. He is supposed to jump first. We already have our snap hooks secured on the extensions and are ready to jump. The pilot emerged from the cockpit and said something to the jumpmaster. We then knew we would soon be jumping. Everybody immediately took heart; they began to adjust their harnesses, fasten their helmets more securely....

The signal light flashed on, and the siren sounded. We all stood up. Then the green light finally came on. The signal panel flashed "Go!" The jumpmaster's hand touched the shoulder of Warrant Officer Nikolay Polishchuk. Private Yevgeniy Denisenko jumps next. Following him out the aircraft are Privates Il'ya Tkhor, Vasiliy Gusev, Lev Andreyev.... The wind hits you hard in the face; then there's the sensation of an air pocket--that's when the line whips out of the stowing flutes on the deployment bag--and the snap of the canopy over your head.

At this altitude you don't feel like you're flying. But the earth draws relentlessly nearer. The most important thing at this point is to execute a good landing. We form up in a group as we have been taught; I fall on my side, quickly bounce up and run out from the leeward side; the air is expelled from the canopy. Il'ya Tkhor lands nearby.

We fold our parachutes neatly into their packs and move to our assembly point. A few minutes later everyone is moving out quickly to execute the mission assigned by the commander.... The parachute is only the means of delivering assault troops to the "enemy" rear; the most important thing is what they actually accomplish on the battlefield.

...Unaware of our feet sinking into the sand and the scorching sun, we dash across open terrain into a wooded area. There in the woods we destroy the imaginary enemy and his fire positions. We then ford a river, make our way through some bush and suddenly find ourselves at the edge of a "minefield." Skirting around it, we come upon an "enemy" machine gun, but Lev Andreyev sees the danger in time. Creeping up silently, he takes out the crew. Our way is now clear. We then dash over to another area, where Vasiliy Gusev and Il'ya Tkhor have seized an identification prisoner. Our mission has been accomplished.

The drone of more aircraft...and the sky blossoms with white canopies. Airborne assault forces are making another parachute jump. How many more lie ahead! And every one of them will be contributing to the development of a strong, courageous and strong-willed fighting man.

"Isn't it frightening to jump?" both my acquaintances and strangers ask me that question time after time.

What do I tell them?

You always get worked up, whether it's the first time or the tenth time. But to overcome this fear--this is the courage without which you can't call yourself a soldier.

Copyright: "Sovetskiy voyn", 1981



## GROUND FORCES

### GERMAN SOURCE ON RPG-18 ANTITANK GRENADE LAUNCHERS

East Berlin MILITAERTECHNIK in German No 3, 1982 (signed to press 15 Mar 82)  
p 161

[Text] Among the types of ammunition contributing to a noticeable increase in antitank defense directly in front of our own main line of defense is a new type of Soviet weapon: the reactive antitank grenade 18. The shape of the weapon, its position during the launch, and the principle of grenade propulsion lead one at first glance to classify it as a bazooka. It was designed to be a different antitank weapon, to be mass-deployed in directions heavily threatened by tanks. Based on this purpose, only the absolutely necessary, but not the full technological potential, was used for this weapon.

On the one hand, its range of 200 m makes it technologically complex because of the amount of propulsion required for this distance. On the other hand, the launching tube and the grenade had to be built as a unit to make it suitable for mass deployment. This led to a weapon which could be used only once, and having cheap and simple components such as the visor, trigger and slide bolt. Technologically, the RPG-18 is the result of a careful analysis of expense versus use potential. It can therefore not be compared to the current state of the art in terms of science and technology. If this would have been achieved, it would have been combined with unjustifiable production costs. Seen in this light, the RPG-18 technology cannot be compared to any of those existing at present.

#### 1. Structure and Function of the RPG-18

The RPG-18 consists of two main parts: the launching tube and the grenade. Both main parts form one unit in terms of storage, inventory, use and ammunition calculations. The tube, which remains behind after the grenade has been launched, is free of explosive and is collected and disposed of just as other ammunition empties.

A simulator RPG-18 is used for testing. It has an inert warhead and fuse. The simulator cannot be used for the actual purpose of the grenade launcher, namely the destruction of tanks and armored vehicles. Especially prepared and marked launching tubes can be used to practice the operation. However, they do not last very long since some components are designed especially for one-time use.

The RPG-18 has different positions for transport and for combat. For combat, the two tubes (inner and outer) must be pulled apart like a telescope. They then form the launching tube. At the same time, the diopter mantlet and the target identifier snap into place, and the front tube cover folds down. The launching mechanism goes into position. Once an RPG-18 is prepared to this point, it must be launched. A weapon once pulled apart cannot be put back into its original assembled state.

The trigger is cocked by folding the diopter mantlet back. The lock, which had the diopter mantlet stored in it during transport, then snaps up. The lock is also an important external signal for the operator. If it is up, the weapon is cocked. Then the lock is in the same position, the weapon can be cocked and secured.

The visor consists of the diopter mantlet and the target identifier. The diopter mantlet has two openings for sighting at temperatures of above and under zero degrees, one of which is always closed, depending on how it is set. The target identifier has four distance indicators (50, 100, 150, 200m), a device for showing approximate distances, and an auxiliary front sight for firing up to 70 m in limited visibility.

## 2. Launch and Effect on the Target

Firing of the RPG-18 occurs through primers by way of a firing pin. The impulse is amplified with a squib and led centrally into the grenade from behind through a plastic tube. Through a black powder first fire charge, the propellant charge made of smokeless powder is ignited. The propellant charge burns up while the grenade is still in its launching tube. This prevents any possible danger or disturbance to the operator. At the same time, tangential channels in the combustion chamber cause a rotating motion of the grenade. The grenade leaves the launching tube with a velocity of 114 m/sec.

On impact, a two-part piezoelectric fuse starts ignition in an extraordinarily short time. The new type, funnel-shaped explosive triggers a cumulative effect, resulting in an armor-piercing capacity which is not expected from a 64-mm caliber grenade. It pierces the armor of all modern armored combat vehicles.

If the grenade misses its target, it self destructs 4 to 6 seconds after launching.

The RPG-18 is 705 mm long in its transport position. This makes it highly suitable for airborne units as well.

For the planned mass deployment, the weapon has stickers giving instructions on operation and safety regulations on both sides. Even untrained soldiers can use it. Each RPG-18 is packaged in hermetically sealed plastic wrap. Each crate contains eight RPG-18.

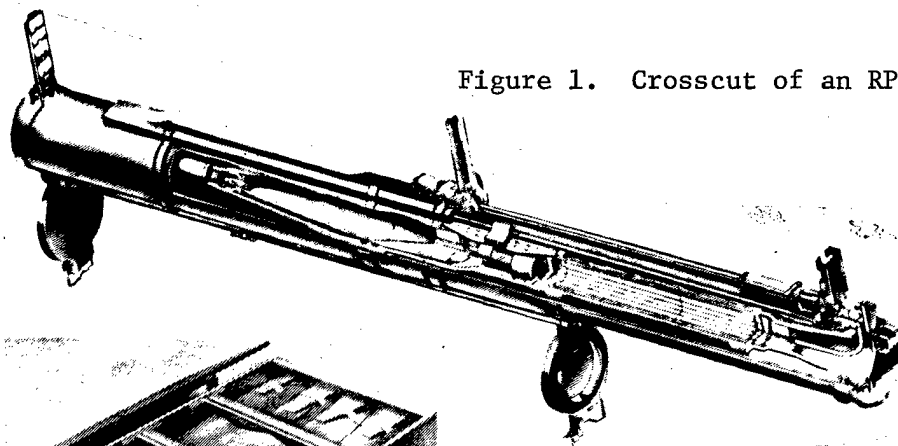


Figure 1. Crosscut of an RPG-18

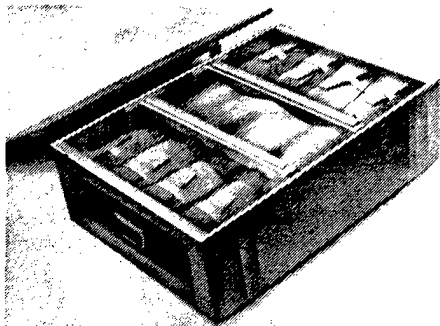


Figure 2. Packaging of the RPG-18

9328

CSO: 1826/052

## LOGISTICAL SERVICES AND SPECIAL TROOPS

TABLE OF CONTENTS: 'TYL I SNABZHENIYE', No 11, 1981

Moscow TYL I SNABZHENIYE SOVETSKIKH VOORUZHENNYKH SIL in Russian No 11, Nov 81 (signed to press 16 Nov 81) p 2

[Text]	Table of Contents	
S. Kurkotkin -- Toward Greater Success in Mastering Military Skills .....		3
Implement Decisions of the 26th CPSU Congress!		
V. Shimanskiy -- Evaluating the Purchaser .....		10
Combat, Political and Special Training		
M. Mitin -- A Creative Approach to Training .....		16
V. Natal'chenko -- The Officer's Immediate Assistants .....		20
A. Vasilets -- When the Missile Carriers Take Off .....		23
People and their Work		
P. Altunin -- Everything from the Commander.....		25
An Economical Economy		
F. Nozdran', V. Dudko and K. Pushkarev -- For Each Gram of Fuel .....		30
The Style of Administrative Work: Experience, Searching, Problems		
I. Koltunov -- A Criterion of Enterprise .....		33
This Was during the War		
A. Beloborodov -- The Courage and Steadfastness of Rear Services Troops ..		36
MATERIAL AND MEDICAL SUPPORT, FINANCE, MILITARY LIFE		
A. Danilov -- Financial Control in the Unit .....		39

## Model Services for Each Garrison

R. Chekmarev -- In the Oblast Center.....	43
V. Mukhin -- Initiative, Searching .....	45

A. Zakharov -- What's New in Food Supply Service Accounting .....	49
For the Rear Services Specialist's Notebook .....	51
V. Nayda -- Diet Therapy in the Unit Medical Center .....	53

### Consultation, Advice, Recommendations

V. Korochentsev -- Drying Uniforms and Footwear at Permanent Locations and under Field Conditions .....	55
--	----

### On the Military Sovkhozes and Kitchen Farms

P. Kalinin -- The Advantages of Renovation and Modernization .....	57
--	----

### MEANS OF COMMUNICATION, TRANSPORT, SUPPLY, TECHNICAL SUPPORT

A. Gusarov -- Solving Problems in the Field .....	59
N. Malyy -- Don't Forget about Accident Prevention .....	62
M. Migraleyev -- Full Maintenance for Special Machinery .....	64

### Innovative Creations

P. Khomich -- The Contribution of Railroad Workers .....	67
A. Kushnir, A. Obodin -- In Place of Crosswalks .....	--
A. Mizyak -- Improving Therapy and Diagnostics .....	68

### AT THE USSR EXHIBITION OF NATIONAL ECONOMIC ACHIEVEMENTS

M. Artamonova -- The Possibilities of Fish-Raising Ponds .....	69
--	----

### LETTERS TO THE EDITORS

N. Rybak -- So the Meeting Would Be a Success; R. Nasedkina -- Gas Around. And at Our Place...?; V. Gavrilov -- How to Improve Proficiency Ratings?; N. Chumakov -- A "Temporary" Object .....	71
--	----

### REVIEWS, SUMMARIES, NOTES

I. Grigor'yev -- A Book about the Ul'yanovsk Higher Military Technical.....	74
---	----

### In the Armies of the Capitalist Countries

V. Sokolov, M. Yershov -- On a Course toward Greater Militarization .....	75
Chronicle .....	78
The Artist's Smile .....	79
The Journal Publicized It. What's Been Done? .....	80

Copyright: "Tyl i snabzheniye Sovetskikh Vooruzhennykh Sil", 1981  
8963

CSO: 1801/055

## LOGISTICAL SERVICES AND SPECIAL TROOPS

### EXCESSIVE CONSUMPTION OF MATERIAL RESOURCES DISCUSSED

Moscow KRASNAYA ZVEZDA in Russian 29 Oct 81 p 2

[Article by Major General-Engineer S. Yermilov: "We Can Have No Consumption to Excess, For Thrift and Economy"]

[Text] It is well-known that the less it costs to put up buildings and other structures the more resources we can save to construct additional housing and other facilities. This means that, in terms of its economic effect, a reduction in expenditures of material resources is equivalent to an increase in capital investment.

It should be pointed out that in meeting requirements imposed by the 26th CPSU Congress concerning economical expenditure of material resources, collectives of planning and construction organizations and industrial enterprises of the USSR Ministry of Defense are making a great contribution to the state's roster of frugal managers. Among them are to be found the organizations and enterprises headed by S. Voinov, G. Glazunov, V. Koenman, V. Boyarun and many others.

Unfortunately, however, the campaign for thrift and economy is far from everywhere being waged with the necessary persistence. Evidence of this is to be seen in facts brought to light by the USSR People's Control Committee during spot checks in a number of collectives of the Central Asian Military District's Construction Directorate (Colonel-Engineer V. Lyubimov, chief; Colonel-Engineer L. Nikiforov, chief engineer) as well as in the construction organization headed by Colonel-Engineer V. Plisko.

As it turned out, over the course of the previous two years, SAVO [Central Asian Military District] builders had consumed metal, cement and commercial timber in such excessive quantities that these materials could have been used to make more than a thousand motor vehicles and manufacture enough prefabricated panels, wallboard and joinery to build several multistory residential structures.

How are we to explain such poor management? First of all by the fact that for the years 1979 and 1980 the USSR Ministry of Defense's Glavvoenstroy [Main Directorate of Military Construction] failed to set any material economies targets whatsoever for the SAVO's construction directorate. So it one can understand how no really purposeful efforts had been made in the direction of insuring efficient, economical use of metal, cement and timber on district construction projects. Individual collectives consequently operated unprofitably and ran up great losses.

Things are not much better with regard to material resource economies in the organization comrade Plisko heads. Established targets for reductions in materials consumption have not been met once here in the past several years. Last year saw 44 tons of excess metal consumption instead of any economies, while targets for reductions in cement consumption were met to the extent of only 33 per cent. All this comes as a result of the fact that the collective's managers and party organization have not devoted the necessary attention to questions of economy and that a matter of great national importance has for all practical purposes been allowed to take its own course.

Cement and joinery getting soaked in the rain, concrete ground into the mud under vehicle tires, metal structures becoming disfigured, lumber rotting in the open air and reinforcement iron rusting away are not infrequently to be seen here. And the supervisors at these construction sites are reconciling themselves to this state of affairs.

Poor planning of material resource economies is no little detriment to this effort. In 1981, for example, each UNR [work supervisor's section] within the SAVO construction directorate is to economize to the extent of 99 tons of cement, 8 tons of rolled metal and 136 cubic meters of lumber. But the problem is that each one of them has been assigned plans for construction and assembly operations with vary with respect to both structure and volume. Can we really have this kind of "levelling?" It is evidence, of course, of a purely formal approach to this question and is to a certain extent to be explained by the absence of any document such as one outlining instructions governing methods to be employed in preparing plans and measures for economies to be achieved in the use of all types of material resources as well as by a failure on the part of the main and central directorates adequately to monitor this economy campaign.

There are, of course, other things responsible for overconsumption, inefficient use and losses of metal, cement and lumber. Among others we could cite neglectful accounting procedures, overstatement of consumption norms and departures from the proper procedures to be employed in preparing concrete and cement mixtures.

The enterprises headed by Lieutenant Colonel-Engineer A. Cheshkov and Major-Engineer V. Zabolotnyy manufacture reinforced concrete products. Customers are pleased with their products. But upon investigation it turned out that they were achieving their product quality by overstating design strength, which was the result of their use of excessive quantities of cement. The UNR headed by Lieutenant Colonel-Engineer V. Rezhets is guilty of gross departures from procedures established for preparing concrete mixes and mortars. The people here "eyeball" their measurements of cement, gravel and sand, which they add by the shovel-, bucket- and wheelbarrowful.

Substantial quantities of costly construction materials are lost as a result of careless storage. Cement is not infrequently to be found simply piled up without being separated out by type. Warehousing procedures are particularly poorly organized in the UNR where Lieutenant Colonel-Engineer V. Krivosheyenko is the deputy section supervisor in charge of material and equipment supply.

Virtually no one is exploiting the great potential for increasing economies in cement consumption offered by a process of regulating the quantities of the various ingredients added and by using plasticizing additives. Many plants are now using fine gravel to make concrete foundation blocks, which not only makes them expensive but also increases the quantities of cement consumed.

Instances in which surplus material resources are concealed from the state inventory are also a cause of concern; this not only creates the soil for a variety of abuses, it disorganizes operational supply and planning and does serious harm to our economy. A spot check revealed that as of 1 January 1981, the collectives headed by Lieutenant Colonel-Engineer V. Rezhets and Majors-Engineer Kh. Aubikero and V. Zabolotnyy had concealed from the inventory a total of 785 tons of rolled ferrous metal products, 642 tons of cement, 2,767 cubic meters of precast reinforced concrete and 480 cubic meters of lumber.

Analysis of cases of mismanagement shows that factors predetermining inefficient consumption of metal, for example, would not infrequently include poor planning decisions and embellishments and excesses in building architecture.

Study of plans for residential quarters and cultural and personal services facilities prepared by the military planning office headed by Lieutenant Colonel-Engineer Ye. Babenko revealed that they were not providing for the use of load-bearing structures of the high-strength and light concretes or for the reinforced concrete elements with highly effective types of reinforcement, economical shaped rolled metal pieces and many other items which have been recommended for extensive utilization throughout the country. By continuing to employ their old plan solutions, designers are holding back the development of our industrial base and failing to motivate builders to strive for new progress.

Underestimation of questions connected with economies in metal consumption in planning and design had led to a situation in which ten of twenty plans examined called for expenditures of steel per square meter of the usable area of the buildings involved which were substantially higher than the standard levels established by USSR Gosstroy. Five facilities constructed in the district in accordance with military plans office technical documentation alone accounted for more than 320 tons of excessive metal consumption. In a number of plans, metal was used where it could have been replaced by less costly and more readily available materials without having any negative impact upon the strength of the structures involved.

Economical utilization of construction materials and other material resources will to a great extent depend upon how nearly technical solutions approach the optimum and how well planners and designers are able to combine advances in science and technology with the actual potential of the industrial base. But the qualitative level of our plans must unfailingly surpass the current capacities of our industrial base, serve as a stimulus to its further improvement and mark out directions for its future development.

The 26th CPSU Congress set us the task of achieving the best and the quickest end results from our labor without any substantial increase in manpower and material resources. In his report to the congress, Comrade L. I. Brezhnev formulated this task in these eloquent words: "the economy must be economical." To economize in both great things and small things, to economize everywhere and in everything--this is the party and civil duty of every manager and every worker.

8963

CSO: 1801/055



## DOSAAB AND MILITARY COMMISSARIATS

### RECOMMENDATIONS FOR INCREASING ACTIVITY OF PRIMARY ORGANIZATIONS

Moscow SOVETSKIY PATRIOT in Russian 2 Dec 81 p 2

[Article: "Recommendations of the All-Union Conference on Science and Practice 'Ways and Means of Increasing the Activity and Aggressiveness of DOSAAF Primary Organizations in Light of Requirements Imposed by the 26th CPSU Congress'"]

[Text] The 26th CPSU Congress, a major political event of our time, has formulated the fundamental problems in the fields of domestic and foreign policy and defined the general line of our motherland's economic and sociopolitical development for the 1980's. The working people of our country have with enormous enthusiasm set about implementing the historic decisions of the 26th Party Congress.

Materials issuing from the party congress gave particular attention to questions bearing upon the development of Lenin's teaching concerning the national nature of the defense of the achievements of socialism and of the effort to increase the defense capability of the USSR and the combat potential of its Armed Forces. This is a product of the complex and contradictory nature of the international situation and the intensifying aggressive plotting of the enemies of peace, democracy and socialism.

The Communist Party and Soviet Government attach great importance to active participation on the part of all public organizations in carrying out the tasks involved in insuring the security of our country and the peaceful, creative labors of the Soviet people and in preparing them to defend the motherland.

Making its worthy contribution to the effort to fulfill Lenin's behests concerning defense of the socialist fatherland and to respond to the Communist Party's call to increase the effectiveness of military-patriotic indoctrination, to involve the broad masses of working people and youth in programs of military training and instruction and to strengthen the union of the people and their Armed Forces is the All-Union Voluntary Society for Cooperation with the Army, Air Force and Navy (USSR DOSAAF).

Under the direction of party and soviet organs, organizations of the defense society intensify with each passing year their efforts in connection with the organization of military-patriotic, mass defense, training, instructional and sports activities and are extending their influence and increasing their authority among the country's population.

An important role in the practical accomplishment of tasks with which DOSAAF has been charged belongs to its primary organizations, which constitute the foundation of the defense society and whose duty it is to serve as centers of mass defense activities. It is precisely within the primary organizations that millions of workers, kolkhozniki, employees and students develop the habits of active participation in mass defense work, study basic military principles and train and prepare to defend the socialist fatherland. The achievements and successes of the defense society as a whole comprise the practical results of the work of its primary organizations.

Full and effective fulfillment by primary organizations of their responsibilities as defined by DOSAAF regulations depends directly upon the level of leadership exercised and the attention given to their performance on the part of all higher DOSAAF committees.

With the objective of energizing DOSAAF primary organizations and of making them true centers of mass defense activity, the All-Union Conference on Science and Practice recommends:

1. Guiding themselves by requirements imposed by the 26th CPSU Congress and decisions of the 8th All-Union DOSAAF Congress, the DOSAAF central committees of the union republics and kray, oblast, city and rayon DOSAAF committees should continue to focus their attention upon questions connected with improving the forms and methods of primary organization work and expanding their participation in the effort to fulfill national economic plans and to strengthen the defense capability of the socialist fatherland. They should see one of their central tasks to lie in improving the organizational aspect of the activities of their primary collectives and in improving the quality and increasing the effectiveness of mass defense work directly within the production and training components of enterprises, construction projects, kolkhozes and sovkhozes and the corresponding activities in institutions, general educational schools, vocational-technical schools, technicums and higher educational institutions.

With this objective in mind they should provide continuous and differentiated direction and supervision of primary organizations and insure that each of them comply fully and undeviatingly with provisions of DOSAAF regulations.

Current and long-term plans should provide for concrete steps to raise the level and increase the effectiveness of the mass defense efforts undertaken by primary organizations, to insure that they are provided with the material, equipment and facilities they require and to monitor their performance in compliance with decrees which have been adopted and decisions which have been made and in accomplishing assigned tasks.

Systematically analyze and generalize on the basis of the practice and experience primary organizations accumulate and respond promptly and effectively to processes and quantitative and qualitative changes occurring within them. Particular attention should be given in this connection to organizations which are lagging behind. Render the leaders and aktiv of primary organizations all possible assistance in accomplishing assigned tasks, rectifying deficiencies, in planning their work and conducting their mass defense activities. In efforts to accomplish these tasks enlist the assistance of committee members, nonorganizational departments, federations and judging organizations, methods councils and lecture groups.

Extend the practice of assigning committee and nonorganizational departmental personnel to specific groups of primary organizations.

On the occasions of plenums and meetings of committee presidiums regularly discuss measures to improve the practical aspects of primary organization efforts and have their leaders on the status of their mass defense work.

Undertake all steps necessary to support and publicize new ideas and experience, creative initiative and effective, advantageous enterprises launched by front-rank DOSAAF collectives, to which end the possibilities offered by the local press, radio and television should be exploited more fully and concrete measures taken locally to print brochures, placards and posters and set up photo displays.

Extend and strengthen sponsorship arrangements between DOSAAF sports clubs and schools and primary organizations in production associations, large enterprises, institutions and educational facilities and DOSAAF organizations on kolkhozes and sovkhoses and in vocational-technical schools, general educational schools, children's homes and boarding houses.

Render assistance to and cooperate with primary organizations in procuring new sports and other equipment and in the development of a cost-accounting system.

Make fuller use of all forms of material and moral incentives as regards the chairmen and activists of primary organizations, taking into account the indicators and final results in all areas of mass defense activity.

2. Okrug, city and rayon DOSAAF committees exercising direct leadership and supervision over primary organizations should orient their efforts and attention in the direction of unifying military-patriotic indoctrination and the instruction provided defense society members in basic military principles, improving the publicity and dissemination of technical military knowledge, improving the quality of the training and preparation of young people for service in the Armed Forces and cadres in the mass technical professions for the national economy and of insuring all possible development and popularization of technical and applied military sports. All organizational activities in these directions should be subordinated to the single objective of training and preparing working people, our young men above all, for service in defense of the socialist motherland.

Guided by provisions of Articles 33 and 34 of DOSAAF regulations, take effective steps to form primary, shops, brigade and equivalent organizations in labor and training and educational collectives where they do not now exist.

Formulate annual plan targets in all areas of primary organizational activity, taking into account the size of these organizations, the composition of the DOSAAF membership involved, the specific nature of the associated production activity, the practical results which have been achieved and the training-material base available.

Demonstrate an unflagging concern for the selection and indoctrination of primary organization chairmen. Continue efforts to improve the system for instructing them in the practical aspects of mass defense work. Hold differentiated seminars taking into account the specific characteristics of a given category of primary organization. In the case of these particular training formats, give attention primarily to exchanges of practical experience and, taking front-ranking organizations as examples, to demonstrations of practice associated with preparing and putting on military-patriotic, mass

defense, sports and other activities. At the same time, individual instruction and practical assistance directly on-site should still be the primary method employed to instruct primary organization chairmen and public activists.

Work for fundamental improvement in the direction of socialist competition for fulfillment of plan targets for the Eleventh-Five-Year-Plan period. Taking as a basis the conditions for the All-Union Socialist Competition for DOSAAF Organizations, develop conditions for competition between primary organizations with reference to their production groups.

Work consistently to insure that all primary organizations participate in socialist competition and that their obligations contribute to raising the level of mass defense work and to energizing the DOSAAF Membership. Monitor the progress of competition continuously and compute performance results carefully and regularly, taking care in the process to avoid any formalism, conventionalism or sensation-mongering. Making use of visual agitational aids and word-of-mouth presentations by agitators and propagandists, insure that wide publicity is given results achieved in competition and that there is thus the possibility of duplicating new and innovative experience. Introduce the practice of having competing organizations check one another's performance in fulfillment of the obligations they have undertaken and include mass defense items in the overall socialist obligations of labor and training and educational collectives.

Demonstrate more initiative and persistence in expanding within the primary organizations the network of STK [technical sports programs], courses, technical groups and sports sections and teams. Monitor the activities systematically and render any assistance required with respect to methods and materials.

Taking advantage of the grounds and facilities of large organizations, build well-equipped classrooms, firing ranges, sports grounds and obstacle courses so that they can be widely used by many defense collectives within a rayon or city. To achieve this objective, concentrate the efforts and material resources of interested DOSAAF primary organizations and pool the 30 per cent deductions from membership dues.

Improve direction of the auditing commissions (auditors). Increase their ability to insure that public resources are expended properly and economically and that primary organization property and equipment is properly preserved and efficiently utilized. Hold regular instructional meetings and seminars with them to deal with practical matters as well as to provide opportunities to exchange work experience.

Take all steps necessary to strengthen ties between primary organizations and DOSAAF clubs, schools and houses. Take fuller advantage of the possibilities they offer primary organizations as sources of methodological and technical assistance in putting on mass defense and sports activities, disseminating technical military knowledge and in training group and course leaders, public instructors and sports trainers and judges for work in lower-level society collectives.

Each DOSAAF committee and house should set up and have available reference tables (display windows) with literature and manuals on methods and model documentation for consultations and briefings for primary organization chairmen and activists.

3. Primary organization committees (chairmen) should continue their introduction of the volunteer principle in all spheres of DOSAAF collective activities. Organizational

work and indoctrination on compliance with provisions of DOSAAF regulations should proceed on the basis of extensive initiative and independent effort on the part of defense society members. With these objectives in view it is necessary:

- to provide each DOSAAF member with real opportunities to discharge his responsibilities and exercise his rights in conformity with society regulations and to participate actively in mass defense, military-patriotic and sports activities, in the planning and organizing of activities and in the monitoring of progress toward implementation of plans and decisions adopted;
- on a continuous and periodic basis to maintain the practice of giving DOSAAF members responsibility for general education, military and sports training, taking their wishes and abilities into account. Through all forms of indoctrination create within the collective an atmosphere of trust and comradely mutual assistance, rigid exactingness and strict responsibility for duties with which one has been entrusted;
- within collectives of enterprises, kolkhozes, sovkhozes, institutions and educational facilities to conduct systematic organizational and mass political activities with the objective of increasing the ranks of the defense society and, utilizing all forms of these activities, clearly and understandably propagandize and popularize DOSAAF's objectives and tasks and the results of the practical activities of its organizations;
- to exercise continuous supervision and direction of DOSAAF organizations formed in shops, brigades, sections, classes, on shifts and within the framework of courses in higher educational institutions. Improve the forms their activities take and increase the impact they have upon the effort to energize defense society members;
- in all spheres of DOSAAF primary-organization activity, in every possible way to expand links and interaction with trade union, Komsomol and other public organizations within the enterprise, sovkhoz, kolkhoz, institution or educational facility;
- to form from among the public aktiv as adjuncts to committees standing commissions on the primary spheres of DOSAAF activity;
- enlarge an organization's public aktiv. Depending upon its size and the nature of the production (or training or educational) activity involved, this aktiv could include, in addition to members of the committees and standing commissions, members of the lecturers group, the council of the military and labor glory room (museum) or the STK council; sports organizers; agitators; the editor (editorial board) of the DOSAAF organizational wall newspaper, photo journal or information bulletin; leaders of technical military groups and courses, collective radio station managers and sports section and team leaders; sports trainers, instructors and judges; DOSAAF members participating in the organization of the all-Union Komsomol and youth field trip to sites of historical revolutionary, military and labor significance for the Communist Party and the Soviet people and of the Zarnitsa and Orlenok military sports games; distributors of DOSAAF lottery tickets and others. Primary organization leaders should work continually with their aktiv, rely upon it, draw enrichment from knowledge and experience and develop in their activists a love for the task with which they have been entrusted and a desire to be successful in accomplishing the tasks that lie ahead;
- with the objective of raising the level of creative activity of DOSAAF members, to make all possible use of socialist competition among shop and equivalent organizations.

On the basis of individual and collective obligations in lower-level components, to define and undertake socialist obligations for a primary organization as a whole. Run competition for the best-organized military-patriotic indoctrination for DOSAAF members, for the greatest number to be included in a program of technical military instruction and improvement in the quality of this instruction, for increases in the number of rated sportsmen and improvement of their mastery of technical sports, for norm requirements satisfied within the framework of the GTO [Prepared for Labor and Defense] program, for sponsorship-related activities, for development of a training-material base on a self-help basis and for fulfillment and overfulfillment of plan targets with respect to financial and economic indicators and cost-accounting performance. Insure in this connection that each point of an obligation is realistic, defines concrete objectives and helps mobilize the efforts of DOSAAF members for the achievement of good final results in mass defense activities;

- look at the question of timely payment of membership dues and purchase of DOSAAF lottery tickets by all members of the defense society as a demonstration of their active involvement and concern for strengthening the training-material base for mass defense work and as one of the important indicators of the organizational strength of a primary organization.

All DOSAAF primary organizations should be more active in connection with the military-patriotic indoctrination of workers and young people. With this objective in mind, introduce on an extensive scale the practice of planning measures in connection with military-patriotic work together with trade union, Komsomol and other public organizations and the local civil defense staff, seeing an integrated approach and maintenance of the close-knit unity of ideological-political, labor and moral indoctrination to constitute the key to insuring the effectiveness of this work.

Hold regular readings from Lenin's works and sociopolitical material dealing with military-patriotic themes; give lessons on courage and organize lectures, reports and discussions oriented toward helping DOSAAF members develop a positive outlook on life, high vigilance and a readiness to stand in armed defense of the motherland; evening programs devoted to topical themes, meetings with war and labor veterans and troops from local garrisons and festive send-offs for conscripts leaving for service in the armed forces. Organize joint viewings of movies and television programs, discussions of military-patriotic books and field trips to museums, military units and sites of historical revolutionary, military and labor significance. In large primary organizations introduce activities for registrants and conscripts such as military-patriotic clubs and universities and lecture series for these future soldiers. Improve the organization and raise the ideological level of all forms of military patriotic propaganda. Participate actively in the traditional mass-defense months and weeks and other military-patriotic activities put on by party and public organizations.

See to it that the efforts of DOSAAF primary organizations in connection with the organization of military-patriotic indoctrination are given regular coverage by the local radio service and in visual agitational media and in the wall and mass-circulation press and that the military-patriotic theme becomes an integral component part of the activities of plant and rural clubs, cultural houses, Lenin rooms, libraries and other cultural and educational institutions.

Set up DOSAAF rooms or corners within primary organizations and use these facilities as places in which to concentrate visual agitational materials summoning the viewer

active cooperation with the Army, Navy and Air Force and materials on the military history of the Soviet Armed Forces, service in the armed forces today and on the work of DOSAAF.

Work to popularize DOSAAF periodical publications extensively among workers and students; collect and bind issues of SOVETSKIY PATRIOT and defense society magazines and use material published in these publications in military-patriotic activities.

Consider the basic organizational forms of training and preparing young people for service in the Armed Forces and of all primary organizational training and sports activities to comprise groups for the study of military and technical military subjects, courses to training specialists in the mass technical professions, technical sports clubs, sections and teams in technical and applied military sports and participation in the work and activities of basic military training centers, sports health camps and of the local civil defense staff.

Strive consistently to improve the quality and increase the effectiveness of these forms of activity and work actively to promote the mass-scale development of technical and applied military sports, particularly of driving, motorcycling, parachuting and shooting, and the involvement of DOSAAF members in exercises as part of the GTO program of physical training.

In setting up courses, STK programs and groups, take into account the wishes of the DOSAAF membership and the availability of the materials, equipment and facilities these activities will require as well as of trained personnel to direct them. Take a continuous interest in the attendance and progress of the registrants and conscripts among DOSAAF members participating in the activities of defense society training organizations and basic military training centers; help them and work to increase their sense of responsibility for maintaining and demonstrating a conscientious attitude toward these activities.

Train cadres for the national economy in specialties having direct military application, giving primary emphasis to the requirements of their specific enterprise, kol-khoz, sovkhoz or institution.

DOSAAF primary organizations in higher educational institutions having no military departments should give particular attention to training students in one of the technical military specialties.

With the objective of reinforcing the technical military knowledge DOSAAF members acquire in the course of organized training activities, of improving their mastery of weapons and equipment and of propagandizing for technical and applied military sports, put on topical evening programs and quiz games, automobile races, military games and relays, exhibitions of equipment and sporting weapons and of the creations of rationalizers, radio amateurs and model enthusiasts, sports festivals and competitions and demonstration programs by sportsmen. Conduct these and other activities outside of work and school time or on Saturdays and Sundays; work to insure that they are entertaining, substantial in content and enjoy mass-scale participation.

Drawing upon the assistance of DOSAAF club, school and house staff personnel, specialists from military units, schools and academies, members of scientific-technical and military-scientific societies and participants in the Great Patriotic War and Armed Forces veterans in the reserves and in retirement, work to publicize technical military themes extensively among the defense society membership; hold topical film and lecture

programs and organize series of lectures and talks dealing with the nature of modern war, problems in the development of military equipment and the possibility and means of protecting against weapons of mass destruction.

To raise the level and increase the effectiveness of all types of mass defense activity, give continuous attention to the development and improvement of the training-material base. Taking guidance from the decree of the CPSU Central Committee and the USSR Council of Ministers of 7 May 1966, demonstrate greater consistency and initiative in placing questions before an administration concerning the use of equipment, instruments and apparatus and training manuals belonging to an enterprise, kolkhoz, sovkhoz, institution or educational facility for training or sports activities.

Draw upon public sources to help make fuller use of local resources to equip training classrooms and build the simplest facilities for technical and applied military sports: pneumatic firing ranges, sports grounds, aquatic stations, obstacle courses for multi-activity applied military sports events, motocross tracks, fields for training and competing with models and others.

Insure that each primary organization accounts properly for all material assets, that they are reliably secured, properly operated and legally used.

4. Organs of the periodical press and the DOSAAF publishing house should give greater attention to treatments of the problem of improving the organization and direction of the activities of primary organizations and of increasing their involvement in military-patriotic indoctrination, the dissemination of military and technical military knowledge and in the training of cadres for the national economy and to the development of technical and applied military sports.

Strive consistently to insure that the task of turning primary organizations into centers of mass defense activity finds continuous reflection in printed material on DOSAAF activities.

Systematically publish advice bearing upon the practical aspects of mass defense activities for the benefit of primary organization activists and publicize more extensively their new ideas and innovations.

Take steps to insure that the authors of these new ideas and innovations--chairmen and members of committees and commissions; STK, course and group leaders; sports organizers and other primary organization activists--themselves appear more frequently in the pages of defense society newspapers and magazines.

Improve the efficiency and timeliness of the publication as well as the quality of books, brochures, visual aids, posters and other printed material intended for DOSAAF primary organizations.

The conference expresses its confidence that under the direction of party and soviet organs, with close interaction with trade union, Komsomol and other public organizations and with the support and assistance on the part of military commissariats and military units (chast'), DOSAAF collectives in enterprises, on construction projects, kolkhozes and sovkhozes and in institutions and educational facilities will continue to extend their influence among working and student youth and increase their contribution to the national task of increasing the economic and defensive strength of the socialist motherland.



The conference calls upon DOSAAF's public aktiv, committees and training and sports organizations on the basis of undeviating implementation of the directives of the 26th Party Congress and requirements imposed by the decree of the CPSU Central Committee and USSR Council of Ministers of 7 May 1966 to strive consistently for continued intensification of primary organization efforts to accomplish all tasks lying ahead of the All-Union Volunteer Society for Cooperation with the Army, Air Force and Navy.

8963

CSO: 1801/103

# PERCEPTIONS, VIEWS, COMMENTS

## TABLE OF CONTENTS OF 'ZARUBEZHNOYE VOYENNOYE OBOZRENIYE', DECEMBER 1981

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 3-4

[Full-text translated articles published in this JPRS report are indicated with an asterisk (\*); excerpted translations -- with a double asterisk (\*\*)]

[Text] Contents	Page
"Decisive Source of the Might of the Soviet Armed Forces" .....	7
GENERAL MILITARY PROBLEMS	
*"The Military-Political Situation in Southeast Asia"--A. Deyev .....	11
"Belgium's Armed Forces"--A. Vasil'yev .....	17
"Training of Command Cadres in Spain's Armed Forces"--Ye. Zharkov ....	21
"Construction of a Canal Between the Mediterranean and Dead Sea"-- A. Lukanin .....	25
GROUND FORCES	
*"The U.S. Army Tank Battalion in the Defense"--A. Yegorov .....	27
*"Views on Organization of U.S. Ground Forces Air Defense"--G. Dem'yanov	31
**"NATO Ground Forces Portable Radio Sets"--V. Chistyakov .....	35
**"Armored Repair and Recovery Vehicles"--N. Fomich .....	42
AIR FORCES	
*"'Global Shield' Exercise"--V. Pokrovskiy .....	47
"The Greek Air Force"--N. Belkin .....	50
**"Aircraft Flight Operations Support Radionavigation Systems"--S. Borisov .....	55

"F-16XL Fighter Project"--P. Ivanov .....	60
---	----

#### NAVAL FORCES

*"Views on Employment of Mine Weapons in the Baltic Straits Zone"-- V. Ovsyanikov and A. Kolpakov .....	63
*"'Ohio' Class SSBN Logistical Support System in the Pacific"--G. Perov	66
*"Shipbuilding in the United States"--V. Grenkov .....	69
"The F-18 Hornet Carrier-Based Aircraft"--I. Kutsev .....	77
"British Navy Shipboard Weapons Automated Control System"--N. Viktorov and A. Chirkov .....	83
"Surface Ships of the Principal Types of the Capitalist Countries"-- S. Morekhod .....	84

#### REPORTS, EVENTS, FACTS

"Portugal: Doing the Bidding of the United States and NATO" -- "NATO Mobile Ground Forces Exercise" -- "French Armored Vehicle" -- "Spanish 'Descubierta' Class Guided Missile Frigates" -- "New Israeli Fighter" ** "New Appointments" .....	87
--	----

FOREIGN MILITARY CHRONICLE .....	91
----------------------------------	----

*LIST OF JOURNAL ARTICLES PUBLISHED IN 1981 .....	93
---	----

#### COLOR PLATES

"French ERC 90S (Sage) Wheeled Armored Vehicle" -- "U.S. F-18 Hornet Carrier-Based Aircraft" -- "French Air Force KC-135F Aerial Tanker" -- "Spanish Guided Missile Frigate 'Descubierta' (F-31)"	
---	--

The articles by Soviet authors and the chronicle are based on materials in the foreign press. This issue contains illustrations from "Jane's", the book "Avionics Navigation Systems," the newspapers JERUSALEM POST, AIR FORCE TIMES, and the following journals: AVIATION WEEK AND SPACE TECHNOLOGY, ARMY AND WEAPONS, GROUND DEFENSE INTERNATIONAL, DEFENSE, SOLDAT UND TECHNIK, INTERNATIONAL DEFENSE REVIEW, MARINE ENGINEERING, MILITARY ENGINEER, NAVIGATION, NAVY INTERNATIONAL, PROCEEDINGS, SIGNAL, SEA POWER, FLIGHT, ELECTRICAL COMMUNICATION, AIR INTERNATIONAL, and AIR FORCE.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS OF ACTIVITIES OF UNITED STATES, CHINA IN SOUTHEAST ASIA

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 11-17

[Article, published under the heading "General Military Problems," by Maj Gen A. Deyev: "The Military-Political Situation in Southeast Asia"]

[Text] The expansionist policy of the United States and China in Southeast Asia (SEA), which is based on anti-Sovietism and anticommunism, has turned this region into a dangerous focal area of military tension. Acting in concert, the U.S. imperialists and the Beijing hegemonists are doing their best to impede the development of the countries of Indochina along the road of progress and socialism and to drive a wedge into relations between these countries and the ASEAN (Association of Southeast Asian Nations, which includes Indonesia, Malaysia, Singapore, Thailand, and the Philippines) countries. "The initial cause of the threat which has always existed for the security and independence of the countries of Indochina, for the peace and stability of the nations of Southeast Asia," stated a declaration by the ministers of foreign affairs of the Socialist Republic of Vietnam, the People's Republic of Kampuchea, and the Lao People's Democratic Republic dated 14 June 1981, "lies in the policy of expansionism and hegemony of the Chinese leaders, in alliance with U.S. imperialism." The pernicious effect on the international situation by the partnership between Washington and Beijing is manifested most clearly in Southeast Asia.

The defeat of the U.S. aggressors in Indochina, formation of the united Socialist Republic of Vietnam, the victory of the patriotic forces in Laos, and liberation from the Pol Pot yoke of Kampuchea, which have taken the path of socialist development, objectively promote weakening of the position of the United States and the other imperialist nations, as well as China. Attempting to alter a course of development of events which is unfavorable to them, Washington and Beijing are exerting crude pressure on the nations of this region and are seeking once again to subjugate them to their dictate.

The strategic importance of this region, which contains nine independent nations (the Socialist Republic of Vietnam, the Lao People's Democratic Republic, the People's Republic of Kampuchea, Thailand, Malaysia, Singapore, Burma, Indonesia, and the Philippines; see illustration [not reproduced]), with a total population of approximately 350 million, is determined first and

foremost by its key position on major lines of communication linking Europe, Asia, and the Americas. The SEA nations contain large resources of valuable raw materials (the figures are percentages of world reserves, excluding the USSR): tin -- 52 percent; nickel -- 17 percent; tungsten -- 10 percent. They account for 88 percent of world rubber production, 30 percent of the world's rice production, and approximately 29 percent of world gold production. Recently the attention of the capitalist countries has been attracted by the continental shelf areas of the South China Sea, the Sulu and Celebes seas where, in the estimate of foreign experts, rich oil and natural gas deposits are to be found.

In order to establish dominance in this region, which the U.S. Government has declared to be a sphere of "vitally important U.S. interests," while China's leaders claim that it contains "lost Chinese lands," Washington and Beijing have utilized and are utilizing any and all means and methods of struggle, including the initiation of major conflicts and acts of aggression.

For a period of 9 years, for example, the United States and its puppets waged war against the countries of Indochina -- in scale the largest since World War II. The maximum numerical strength of U.S. military forces alone in South Vietnam reached 600,000 men (a total of more than 2.8 million men took part in the war), employing 600 combat aircraft and 90 warships. U.S. casualties totaled 60,000 dead and 300,000 wounded. Expenditures on this war are estimated by foreign experts to have totaled approximately 150 billion dollars.

The United States was the initiator of creation in this region of the aggressive SEATO (1954, collapsed in 1977) and ANZUS (1971) blocs, securing for itself and its allies a legal basis by treaty for a military presence in Thailand, Malaysia, Singapore and the Philippines. U.S. ruling circles are the main source for obtaining comprehensive, including military, aid by reactionary regimes in this region.

As for China, it has been utilizing subversive activities for quite a long time as a principal means of struggle to achieve its expansionist aims in the region, supported by puppet organizations, various separatist antigovernment movements in the SEA countries. Subsequently Beijing adopted genocide into its arsenal, implementation of which by China's stooges -- the Pol Pot leaders -- brought the Kampuchean people to the edge of total annihilation (more than 3 million persons were murdered and tortured). Recently the Chinese hegemonists have been placing increasing emphasis on undisguised employment of armed forces. The most graphic example of this policy is the perfidious attack on Vietnam in February 1979, in which the southern grouping of China's armed forces, numbering more than 500,000 men (more than 30 divisions), took part.

The schemes of the United States and China failed, but ruling circles in these countries have not given them up. The nature of activities of the Washington administration and the Beijing elite attests to the fact that in the near future, in the estimate of foreign experts, they may step up activities in this region, concentrating efforts in the following principal areas:

increasingly ruthless political-economic actions against the nations of Indochina;

unification of counterrevolutionary organizations and groupings in the nations of Indochina and expanding of the scale of subversive activities against Kampuchea, Laos, and Vietnam;

exertion of military pressure on Vietnam and Laos by maintaining a threat of another invasion of their territories by China's armed forces;

further strengthening of ASEAN, its transformation into a military bloc, and its utilization in the interests of deeper penetration into this region.

A desire to isolate countries which have chosen the socialist road, discrediting their policies and forcing upon them unacceptable and unwarranted ways of resolving the region's main problems is the principal foreign-policy aim of Washington and Beijing. A graphic example is the continuing obstruction of constructive proposals by the nations of Indochina pertaining to ensuring peace, stability, friendship and cooperation in Southeast Asia, which were stated in a declaration at a conference of ministers of foreign affairs of Vietnam, Laos, and Kampuchea in January 1981. A similar attitude greeted proposals on peaceful settlement of the region's problems drawn up at the Fourth Conference of Ministers of Foreign Affairs of these countries, held on 14 June 1981.

These proposals, specifying a clear-cut program of talks both with the ASEAN nations and with China, were declared unacceptable. In their place demands were advanced which cannot be assessed as other than interference in the internal affairs of the SRV, the LPDR, and the PRK. The United States, China, and their allies are currently displaying particular aggressiveness toward Kampuchea. The so-called declaration of an "international conference on Kampuchea" inspired by Washington and Beijing, demands "withdrawal of foreign troops from Kampuchea and the holding of free elections in that country" although, as is well known, genuinely free elections have already been successfully conducted in that country. Under pressure by the United States and China, Pol Pot's representative has retained his seat in the United Nations. The noise and fuss over the question of establishment of a "united front" of Kampuchean counterrevolutionaries and antigovernment Kampuchean groups is continuing. At the beginning of September 1981, for example, another conference of leaders of the principal counterrevolutionary organizations was held in Singapore, a conference which ended without results, however.

Plans to establish a "united front" also specify forming a unified military command for armed detachments of Khmer counterrevolutionaries. It is emphasized in the foreign press that, although such a command has not yet been formally established, in actual fact these detachments are under the control of Beijing, are coordinating their actions, are waging an aggressive armed struggle against the PRK and LPDR, and constitute one of the main factors in the increased tension on the Thai-Kampuchea and Thai-Laotian borders. At the present time, in the estimate of the foreign press, these armed detachments total more than 30,000 men, of whom 20-25 thousand are Pol Pot supporters, 3000-3500 are supporters of Son Sen, and as many as 1000 are supporters of Sihanouk. A large segment of the troops are in Thailand, where they are

undergoing training under the guidance of Chinese advisers and specialists. A total of 5-6 thousand men, as is noted in the foreign press, are engaged in raiding, sabotage and reconnaissance activities on the territory of the PRK, operating in small groups.

From the viewpoint of U.S. imperialism and the Chinese leaders, maintaining and increasing the threat of invasion from the north is an important element of military pressure on the nations of Indochina. Toward this end Beijing is continuing to escalate tension by means of provocative statements about its readiness to teach Vietnam a "second lesson," staging regular border incidents (in the first four months of 1981, the Chinese military carried out more than 1800 armed actions), and maintaining in a continuous state of readiness on the border of the SRV a large force totaling 18 divisions of combat troops and 16 divisions of local troops.

A large U.S. force grouping is deployed in Southeast Asia toward these same ends. Up to 50 combat aircraft and 10 warships of the Seventh Fleet are permanently stationed in the Philippines (Clark Air Force Base, Subic Bay Naval Base). Air bases in Thailand (U Tapao, Don Muang, Takhli) are used for temporary basing of U.S. aircraft.

The United States and China are devoting increasing attention to political and military strengthening of the ASEAN organization. As stated by the Indonesian newspaper MERDEKA, the aim of U.S. policy in this region is "to place the ASEAN nations in opposition to the countries of Indochina, which are building socialism, and to draw the ASEAN countries into the orbit of its global strategy. In this they are acting in concert with Beijing and Tokyo." The substantial increase in attention paid by the United States to the association is explained in the foreign press as primarily due to military-strategic considerations, since Washington considers this region to be the linchpin of the U.S. policy of building up its forces in the Pacific and Indian oceans. The Pentagon would like to turn this area into an intermediate support point between bases on the islands of Guam and Diego Garcia.

A characteristic element in the development of ASEAN is its gradual militarization, which is creating the preconditions for development of the association into a military-political bloc. This process, under the camouflage of lies about a "danger" which is allegedly presented to the association by the Soviet Union and socialist Vietnam, is clearly taking place under the influence of the United States and with the approval of China. The imperialists and their Beijing accomplices are attracted by the substantial military potential possessed by these nations (according to figures in the foreign press, the overall numerical strength of the armed forces of the ASEAN nations is 700,000 men, with ground forces totaling 12 divisions and 34 brigades, air forces possessing approximately 460 combat aircraft, and naval forces -- more than 150 warships). The following figures, cited in "Jane's," attest in particular to the increased military capabilities of ASEAN: the association's total military expenditures increased from 4.5 to 6.6 billion dollars in the period 1978-1980, that is, a 50 percent increase. During that same time their armed forces grew from approximately 650 to 700 thousand men.

According to the schemes of U.S. strategists, militarization and arms purchases connected with it should make the countries of the association more dependent on the United States and should facilitate its transformation into an aggressive pact. According to figures in the magazine ASIA RECORD, in the last 5 years the volume of outright-grant arms deliveries from the United States to the ASEAN area totaled approximately 820 million dollars, which is almost triple the figure for the preceding five-year period. Arms deliveries on a commercial purchase basis over the last 3 years have totaled 2.5 billion dollars.

Primary attention is devoted to Thailand, which has become a base for the Khmer and Laotian counterrevolutions and which is the most hostile toward the countries of Indochina. It is to receive 80 million dollars in military assistance in 1982. In exchange, states the ASIA RECORD, the United States is demanding the return of "its" closed-down military bases in Thailand. The Philippines are to receive even more money, since the White House believes that U.S. capability "to extend its military power across the Pacific into Southeast Asia" depends on Washington retaining the "right of unhindered use" of Subic Bay and Clark Air Force Base. In particular, the Pentagon has already re-deployed through these facilities, as through transshipment points, interventionist "rapid deployment forces" units to the Persian Gulf area. The United States, which is counting on taking over the large Gong-Kedah air base which is under construction in Malaysia, plans to increase military assistance to this country by 50 percent in 1982. An important role in furnishing arms to the ASEAN nations is assigned to Singapore, where the West is establishing an extensive network of enterprises to manufacture weapons and military equipment. There is to be an increase in military aid to Indonesia.

At the same time the United States is continuing to nurture the idea of forming a "Pacific community," which would include, alongside Japan, the United States, Canada, Australia, and South Korea, the ASEAN member nations as well. The foreign press reports attempts to establish a foundation for creation, under U.S. aegis, of a new bloc similar to NATO.

It was noted above that a characteristic feature of development of the military-political situation in Southeast Asia is a convergence of U.S. policy with Beijing's hegemonist policy on a foundation of anti-Sovietism and anticommunism. At the same time, as is emphasized in the foreign press, there is taking place acute rivalry between the United States and China. The United States pursues the aim of placing the countries of this region under its dictate. It views Southeast Asia as a link in the global strategy of struggle against the USSR and the other socialist nations. China is assigned a subordinate role in this. It is assigned the performance of functions which the United States, following its defeat in Indochina, does not wish to assume -- aggression, border conflicts, preparation for and direction of actions by various counterrevolutionary and antigovernment armed detachments.

Beijing's ultimate goal is to seize control of a region the territory of which, as already pointed out, it considers to have been detached from China in the past. The character of the present activities of the Beijing leaders in Southeast Asia attests to the fact that their policy is fully in conformity



with statements by Mao Zedong: "We definitely must secure Southeast Asia for ourselves, including South Vietnam, Thailand, Burma, Malaysia, and Singapore.... Having secured Southeast Asia, we shall increase our forces here, which will oppose the Soviet-East European bloc." Considerable attention in efforts to attain this goal, in addition to direct aggressive actions, is devoted to preparing conditions to seize power with the aid of pro-Chinese nationalist movements, as well as persons of Chinese nationality residing in the countries of this region (huaqiao [overseas Chinese]).

At the present time the numerical strength of armed detachments of pro-Chinese antigovernment movements in the countries of Southeast Asia, according to figures in the foreign press, are as follows: approximately 10,000 in Thailand, 12,000 in Burma, 2000 in Malaysia, 2500 in the Philippines, and 1000 in Indonesia. As for the overseas Chinese, their strength lies not only in their numbers (approximately 20 million persons, 5 million of whom reside in Thailand, approximately 11 percent of the population, as many as 4 million in Malaysia, or more than 30 percent of the population, 3.8 million in Indonesia, and 1.8 million in Singapore, or 75 percent of the population), but also in the fact that they control key industries, banks and commerce.

The hegemonistic thrust of China's policy in Southeast Asia is not supported by all ASEAN members. Some (Singapore, Malaysia, Indonesia) oppose establishment of close ties with the PRC. A number of leaders point out that the threat to the security of the nations of this region proceeds primarily from Beijing. In connection with this, considerable concern has been aroused in the member countries of the association by Washington's decision to sell offensive arms to China, which has extensive territorial claims on practically all the countries of Southeast Asia.

As is emphasized in the foreign press, Japan, which is continuing to pursue its own plans of becoming the center "of an integrated economic system in Asia," is attempting, not without success, to elbow its way alongside the United States and China in this region. The degree of Japan's penetration is attested by the fact that Japanese capital comprises 30 percent of foreign investment in the countries of Southeast Asia. Although Tokyo's political objective (to keep the countries of that region within the sphere of influence of capitalism, to isolate them from the USSR and the other socialist countries) coincides with the plans of the United States and China, its economic interests, which are focused on turning Southeast Asia into an important source of raw materials and a market for Japanese goods, in the future will unquestionably become a source of increasing Japanese-U.S.-Chinese conflict, in the estimate of foreign experts.

The policy of the United States and China in Southeast Asia, their intrigues and subversive activities unquestionably exert certain negative influence on the pace of social reforms and economic development of the countries of Indochina. On the whole, however, the internal situation and international prestige of the SRV, LPDR, and PRK are continuing to grow stronger. Their proposals on a peaceful settlement of the problems of that region are finding an increasing number of supporters. Talks between CPSU Central Committee General Secretary L. I. Brezhnev, chairman of the Presidium of the USSR Supreme Soviet, and the leaders of Vietnam, Kampuchea and Laos, held in

September 1981, constituted an important contribution toward strengthening the position of these nations and toward normalization of the political climate in the region.

As Comrade L. I. Brezhnev stated at a meeting with Le Xuan, general secretary of the Central Committee of the Communist Party of Vietnam, "in defiance of Beijing, many Asian countries advocate strong good-neighbor relations. Nor are they allowing Washington to dictate to them. They want to live an independent life. One can only respect this position. Only the Asian peoples themselves, who desire peace and freedom, can be the masters of Asia. They have a right to reject any outside interference in their affairs, in the domain of their vital interests."

Militant imperialist circles and the Beijing hegemonists, who are allied with them, are placing in opposition to the policy of peaceful coexistence pursued by the nations of Indochina, however, a policy of escalating international tension, which seriously threatens the cause of peace in Southeast Asia.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS ON U.S. TANK BATTALION DEFENSIVE TACTICS

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 27-31

[Article, published under the heading "Ground Forces," by Docent and Candidate of Military Sciences Col A. Yegorov: "The U.S. Army Tank Battalion in the Defense"]

[Text] U.S. Army command authorities believe that only the offense can achieve decisive objectives in the battle and operation. Therefore in the course of operational and tactical troop training, special attention is devoted to working on organization and conduct of offensive operations. At the same time it is pointed out in field manuals that conditions will not always be presented which are favorable for a successful offense. At times the situation may make it necessary to turn to the defense. In this connection, in the course of troop training in recent years, considerable importance has been attached to training combined units, units, and subunits to fight a defensive action.

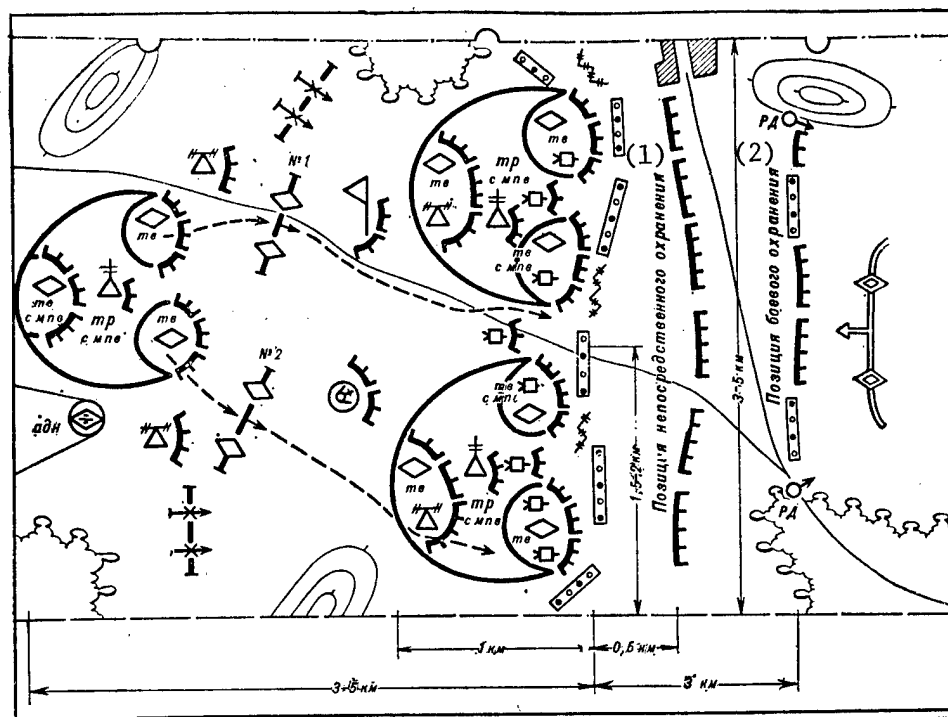
Foreign military experts consider defense to be a forced type of combat action, to which troops usually shift temporarily, with the aim of inflicting defeat on the adversary and creating favorable conditions for a determined offensive. One of the most important demands on defense today is its capability to withstand massive enemy tank attacks. It is therefore believed that the foundation of the antitank defense of combined units should consist chiefly of antitank weapon and tank fire, which depends in large measure on its correct organization in the battalion, particularly the tank battalion. As is indicated in the foreign military press, the procedure of employment of the tank battalion, its place and role in the defensive battle depend on the concrete situation and type of defense being conducted by the division.

The foreign press, synthesizing the experience of training exercises, notes that the tank battalion in the defense operates as a rule as a brigade element, positioned in its first or second echelon. It can also comprise the division reserve, cover the flanks and gaps in its combat formation, defend an important installation (area of terrain), or fight delaying actions with the objective of supporting disengagement and withdrawal of the division main forces, counterattack, and perform other missions. When the division turns to the defense in advance, prior to contact with the advancing adversary, the brigade tank battalion, operating in the division support echelon, may be sent

up into the security area, 15-50 km forward of the forward edge of the battle area, to operate as an element of the covering force.

In the defense the tank battalion would be reinforced with one or two motorized infantry companies, one or two combat engineer platoons, plus other subunits. The battalion's defensive actions will be supported as a rule by a platoon of antitank helicopters, while air targets above the battalion's defended area will be engaged by a platoon of Vulcan self-propelled antiaircraft guns. Battalion task forces (in the battalions -- company task forces) may be formed for performance of combat missions based on battalions in the brigade; battalion task forces make it possible most efficiently to utilize all weapons available in the subunits in various situations.

In the defense, in the brigade's forward echelon, the tank battalion occupies a defended area which is designated as a rule in the sector where the brigade's main efforts are concentrated. The frontage and depth of this area can run 3-5 km, depending on the mission assigned to the battalion, the nature of the terrain, and the strength of the advancing enemy force.



Tank Battalion Combat Formation in the Defense (variant)

Key:

- |                                       |                           |
|---------------------------------------|---------------------------|
| 1. Local protection                   | 2. Combat outpost line    |
| АДН. Artillery battalion              | тв. Tank company          |
| мв. Tank platoon                      | РД. Reconnaissance patrol |
| с мв. With motorized infantry platoon |                           |

After receiving his mission briefing, the battalion commander, taking terrain conditions into consideration, determines the tank company (company task force) defended areas, which may be 1.5-2 km in frontage and approximately 1 km in depth. Platoon strongpoints form their nucleus, where main and alternate tank positions are set up, at a distance of 150-200 m from one another.

In the absence of close contact with the enemy, a combat outpost line is set up at a distance of up to 3 km beyond the forward edge of the battle area, to which a reinforced tank platoon from the battalion support echelon is usually assigned. Forward-echelon tank companies (company task forces) send out immediate protection to a distance of up to 500 m from the forward edge of the battle area. Combat outpost and local security subunits, after accomplishing their missions, usually withdraw behind the forward edge of the battle area and take their places in the company combat formations in conformity with the defense plan (see diagram).

Platoon strongpoints are prepared for a perimeter defense, while firing positions are selected so as to hold firmly not the entire area but rather individual, the tactically most important, terrain and positions, the holding of which determines stability of the battalion defense as a whole. In selecting terrain, attention is directed primarily to available natural and artificial obstacles impeding the advance of enemy tanks, IFV and ACP, as well as organization of efficient observation and surveillance and delivery of intensive aimed fire as the attacking force reaches the FEBA.

Preparation of the battalion defended area usually depends on available time and quantity of assigned engineer manpower and equipment. As is emphasized in field manuals, field fortification activities should be carried out with observance of concealment and camouflage measures (under cover of darkness, smokes, etc); while the most laborious jobs should be performed by combat engineer platoons attached to the battalion, possessing heavy earth-moving equipment and means of mechanizing the laying of minefields. As a rule tank emplacements in the main positions are first excavated and camouflaged, fields of view and arcs of fire are cleared, unmined antitank obstacles are constructed, antitank minefields are laid, routes are laid out for maneuver by battalion subunits, supply and evacuation, command and observation posts are constructed, as well as bunkers to protect personnel against mass destruction weapons. If time is available, alternate and dummy fire positions are also prepared. The personnel of attached motorized rifle subunits dig foxholes forward of the tanks, on the flanks and in the gaps between platoon strongpoints, for the purpose of protecting them against hostile antitank weapons.

According to the views of U.S. military experts, the combat formation of a tank battalion defending in the brigade forward echelon on the main axis of advance is structured in two echelons: two tank companies (company task forces) in the first, and one in the second. When defending in a secondary sector, there may be one echelon with mandatory designation of a reserve (up to a reinforced tank platoon). The support-echelon company defended area, which is selected and fortified on tactically important lines and terrain, is intended for blocking or counterattack with the objective of destroying, jointly with forward-echelon subunits, an enemy force which has penetrated frontally or from the flanks. It is designated deployment lines and directions for counterattacks.

As is noted in the foreign military press, considerable attention is devoted to organization of delivery of fire by all weapons, reconnaissance, antitank and antiaircraft defense, protection against mass destruction weapons, concealment and camouflage of security forces. The battalion commander prepares a defense plan, which specifies distribution of personnel and weapons, sequence of actions in repelling the enemy advance ahead of the FEBA and when it penetrates the battalion defense area, directions of counterattack, organization of teamwork and cooperation between subunits and with adjacent units, employment of minefields, as well as sequence and procedure of logistic support.

A tank battalion in the brigade support echelon (reserve) is designated, judging by reports in the foreign press, for defending the second position or, more frequently, for mounting counterattacks aimed at destroying an enemy force which has penetrated the defense and for reestablishing a deteriorated situation in the zone of responsibility of the forward-echelon brigade, as well as for protecting the flanks when the enemy is breaking through the defense in adjacent sectors. In this case a battalion is assigned an area 8-20 km from the FEBA, where it is to deploy by companies, undetected, with maximum utilization of terrain cover and concealment. The brigade commander in his order assigns the battalion one or two directions of counterattack, routes of advance and deployment lines, which are usually designated behind the rear boundary of the defended areas of the forward-echelon battalions. U.S. field manuals note that a counterattack must be executed with the element of surprise, aggressively, swiftly, in close coordination with supporting means, and under the condition that there is certitude of success. Otherwise the battalion could sustain heavy casualties and equipment losses and fail to accomplish its assigned missions.

According to the views of U.S. Army command authorities, when a battalion is defending in the brigade support echelon (reserve), depending on the situation, terrain conditions, composition and potential character of actions by the advancing enemy force, as well as availability of means of fire support, a portion of its tank subunits may be attached to forward-echelon motorized rifle battalions as reinforcement. Usually these subunits are employed in the battalion commander's reserve to mount counterattacks and to increase the depth of antitank defense, while in certain cases they may be handed over to motorized infantry companies on likely lines of tank approach.

As was noted above, in present-day conditions the defense should be organized in such a manner as to promote inflicting maximum damage on advancing tanks and other enemy armored combat vehicles and to prevent them from penetrating deep into the battalion defense area. In this connection considerable attention is focused on establishing a fire plan for all weapons, especially organic antitank weapons (TOW and Dragon antitank missiles, antitank rocket launchers). It is closely coordinated with the system of antitank and other obstacles, which slow the rate of advance, delay the advance of tanks and other combat vehicles, and sometimes force them to halt, thus enabling weapons to deliver aimed fire on armored targets. For example, it is recommended that antitank minefields be laid on likely lines of tank approach ahead of the battalion forward positions (in gaps between defended areas of companies or company task forces), as well as antitank ditches, sidehill cuts, tank steps, abatis, and other obstacles.

The principal demands made by U.S. military experts on a fire plan is that fire on advancing tanks increase in intensity as they approach the FEBA and that maximum density of fire be established on likely lines of tank approach. A zone of multitier massed antitank fire is prescribed directly ahead of the FEBA, to a depth of up to 700 meters. Great importance is attached to organization of precision, reliable fire teamwork between tanks and motorized infantry.

It is emphasized in the foreign press that a successful defense depends in large measure on how fully are realized the combat capabilities of organic combat support subunits. In this connection U.S. Army field manuals recommend tank battalion mortar platoon (4 106.7 mm self-propelled mortars)\* utilization as fire support to the battle outposts and forward-echelon companies, as well as for missions in the interests of the battalion as a whole, particularly for destroying the advancing enemy's antitank weapons. Platoon main and alternate fire position areas are designated by the tank battalion commander. They are prepared close to the support-echelon company defended area. During defense on a wide frontage, as well as to support the battle outposts, mortar squads may be deployed in temporary fire positions closer to the FEBA, that is, in the defensive areas of the forward-echelon companies.

The reconnaissance platoon in the defense conducts reconnaissance usually by observation, setting up for this purpose as many as four observation posts on the FEBA and on the flanks, each post consisting of a reconnaissance detachment (6 men and an M114 recon APC). Platoon antitank weapons (four TOW and four Dragon launchers) at the disposal of the battalion commander are employed to protect the flanks and destroy enemy tanks breaking through into the battalion area of responsibility. In defense without contact with the enemy, the reconnaissance platoon operates together with the security elements. In addition to its principal mission (reconnoitering the enemy advancing toward the FEBA), it has the task of protecting likely lines of tank approach and of destroying advancing armored vehicles. Antitank guided missile crews deliver fire on tanks and, utilizing terrain irregularities, move from position to position, withdrawing into the battalion dispositions, while reconnaissance detachments, advancing undetected on the flanks, conduct visual reconnaissance.

The Redeye antiaircraft missile section is employed by the battalion commander to protect the battalion command and observation post and company defended area, for which its missile crews (a total of only five) are attached to the companies, while the section leader usually exercises command and control functions during battle by radio.

The radar section (four radars) perform chiefly missions of reconnaissance, focusing on advancing enemy tank subunits and weapons, expeditious discovery of the approach of reserves, plus other tasks. Its radars are deployed in the disposition area of the battalion support-echelon (reserve) subunits and deep in the defensive areas of the forward echelon companies, taking into consideration the character of the terrain both in the battalion defense area and immediately ahead of the FEBA.

\* For tank battalion organization, numerical strength and quantity of principal armament, see ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, No 5, 1981, pp 27-31 -- Ed.

According to the views of U.S. Army command authorities, the enemy should be taking fire at all stages of a defensive battle. On the far approaches to the defense and as the advancing subunits draw closer, these subunits, and particularly the tanks, are engaged by antitank helicopters, long-range field artillery, salvo-fire rocket weapons, tanks, antitank missiles, and mortars. Antitank rocket launchers, heavy-caliber machineguns, and other weapons open fire immediately ahead of the FEBA.

Foreign experts note that the tank battalion commander exercises command and control of the defensive actions of his subunits by radio, usually from a command and observation post sited to the rear of the defensive areas of the forward-echelon companies.

In the absence of close contact with the adversary, the first to engage are the security forces, which inflict maximum damage with their own fires and supporting artillery, delay the enemy's advance, force him to deploy into combat formations prematurely and, offering stubborn resistance, conceal the actual main line of resistance.

When the enemy advances from the final coordination line to the FEBA, foreign authors state, intensity of fire should steadily increase. All weapons positioned in the forward-echelon company defense areas deliver intensive fire at tanks, IFV, APC and other important enemy targets, with the mission of thwarting the organized assault and preventing breakthrough of the FEBA. Considerable importance is attached to employment during this period of antitank helicopters which, operating from behind cover, can hit tanks and other armored targets of the attacking enemy force with the element of surprise.

When the enemy is breaking through in an adjacent defensive sector, steps are taken to protect the flank with tank and antitank missile fires. The reserve can take up alternate positions covering this flank. To contain movement on avenues of approaching tanks, minefields are laid with the aid of remote minelaying equipment.

If the battalion forward-echelon subunits have been unable to repulse the enemy assault, and the adversary has succeeded in penetrating the defense, the battalion commander takes measures to block the enemy in the sector where the greatest penetration has been and to destroy him with the fires of all organic and attached weapons. Small groups of enemy attackers are destroyed by tanks firing in place and by counterattacks by the support echelons (reserves) of tank companies (company task forces).

When the enemy penetrates the defense to the depth of the platoon strongpoints of the forward-echelon companies, a counterattack can be launched by the forces of the battalion support echelon, which is recommended to be mounted into the flank and rear of the penetrating enemy force, with fire support from all weapons, as well as tactical airstrikes. U.S. experts state that if a counterattack is not feasible under the circumstances or has failed to restore the situation, and the enemy has broken through the forward-echelon company defense areas, the drawn-back forward-echelon subunits and the battalion support echelon (reserve) take up alternate positions and hold them,



in order to create favorable conditions for a counterattack by the brigade support-echelon forces.

It is believed that if the objective has been achieved as a result of the counterattack, subsequent battalion actions will depend on the prevailing situation. The tank battalion can recover, reestablish the defense, and prepare to repulse subsequent enemy assaults or to shift to the offensive as an element of the brigade main forces.

Judging from reports in the foreign press, withdrawal and disengagement of a tank battalion can occur only by order of the brigade commander. If the enemy has succeeded in cutting the battalion off from the brigade main forces, its commander takes measures to repulse enemy assaults and to inflict maximum casualties and equipment losses.

The above are some views of U.S. command authorities on employment of the tank battalion in a defensive engagement.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

PERCEPTIONS, VIEWS, COMMENTS

COMMENTS ON AIR DEFENSE ORGANIZATION OF U.S. GROUND FORCES

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 31-35

[Article, published under the heading "Ground Forces," by Col G. Dem'yanov: "Views on Organization of U.S. Ground Forces Air Defense"]

[Text] A future war, in the opinion of U.S. military experts, will be characterized by the extensive employment of diversified, highly-effective offensive air weapons, capable of exerting decisive influence both on the combat operations of ground forces combined units and formations, and on the overall course of a military conflict. U.S. field manuals stress that today's army cannot count on victory in the battle and operation if its principal force groupings are not reliably protected against hostile air actions. According to the views of U.S. Army command authorities, ground forces theater air defense is established on the basis of a unified plan of combined employment of ground forces antiaircraft artillery, tactical fighters, as well as naval AAW weapons (in coastal sectors). The commander in chief of theater armed forces is responsible for its overall organization in peacetime and in time of war. He effects distribution of ground forces antiaircraft artillery<sup>1</sup> manpower and equipment in conformity with the strategic operation plan, the importance of the missions being performed by each force grouping, by the significance of the target installations located in the rear area (area of lines of communication), and also determines concentration of principal efforts and the overall sequence of employment of air defense manpower, weapons and facilities. The air defense zone commander (usually the commander of theater air forces) exercises direct operational control of the latter for providing air cover to troops and rear area installations in the theater.<sup>2</sup> He is directly responsible for air defense planning and establishment of a control and warning system. He approves standing operating instructions on organization for combat operations, which specify the degree of combat readiness and number of alert air defense weapons, commands for opening and adjusting fire, signals and identification features of friendly aircraft, zones of employment of different types of weapons, basic principles of teamwork and coordination, procedure of warning of air targets, plus a number of other measures. Individual points of this document, pertaining, for example, to signals and identification features of friendly aircraft, may be altered in conformity with the situation, which shall be immediately communicated to all air defense units and subunits.

With the aim of increasing command and control precision, the air defense zone is frequently divided into areas, which as a rule are under the control of senior aviation commanders. The antiaircraft artillery and fighter units and subunits operating within the area are operationally under their command. Normally, however, divisional organic antiaircraft manpower and weapons are utilized directly by the commanders of these combined units.

Emphasizing the necessity of consolidating and coordinating the efforts of all air defense means in combat against hostile aircraft, U.S. military experts assign to antiaircraft artillery as a combat arm the principal role in providing air protection to ground forces, nuclear missile weapons, strategic installations and industrial areas in the theater. Organizationally U.S. ground forces antiaircraft artillery manpower and equipment are brought together into U.S. ground forces theater air defense commands, antiaircraft artillery brigades, groups, and battalions. The first three of these do not have a permanent complement.

The U.S. ground forces theater air defense command, which is the highest antiaircraft artillery operational entity, is responsible for coordinating the actions of its component personnel and hardware with the operations and combat actions of ground forces combined units and formations. In addition, its command and control agencies exercise administrative supervision over subordinate antiaircraft artillery units and subunits and organize their combat training and logistic support. It may contain several antiaircraft artillery brigades or groups. The brigades contain organic and attached groups and battalions of various types. The antiaircraft artillery group as a rule contains from two to six battalions of the same type, which are the basic antiaircraft artillery tactical units. At the present time, judging from reports in the foreign press, the U.S. armed forces contain seven independent Nike Hercules surface-to-air missile battalions, 18 Improved Hawk SAM battalions, 16 Chaparral-Vulcan battalions and two battalions of Vulcan self-propelled antiaircraft artillery mounts.

The Nike Hercules SAM battalions (36 launchers each) are intended to destroy air targets at high and medium altitudes. Each consists of four missile batteries and can simultaneously engage four air targets. Usually an antiaircraft artillery group is formed from these battalions to protect important installations in the rear area (lines of communication zone), while some can also be deployed in the army corps rear area, reinforcing corps air defense. According to the calculations of U.S. military experts, a Nike Hercules SAM battalion is capable of providing protection to such targets as a corps rear area, an industrial complex, an important administrative-industrial center (city), a seaport, etc.

Improved Hawk battalions, in the estimate of Western experts, are the foundation of U.S. ground forces air defense. Organizationally they are components of air defense commands (for example, the U.S. ground forces 32d Air Defense Command in the European zone has two groups of four Hawk battalions) and antiaircraft guided missile groups (four to five independent battalions in each). Ground forces are presently equipped with battalions of two types: self-propelled (three batteries of three missile platoons of three launchers each, a total of 27 launchers) and vehicle-drawn (four batteries of two platoons each, a total of 24 launchers).<sup>3</sup>

Chaparral-Vulcan battalions, which are intended to engage low-flying targets, are organic elements of divisions. They contain two Chaparral antiaircraft missile batteries (12 launchers in each) and two Vulcan antiaircraft artillery batteries (12 self-propelled mounts each). Airborne and airborne assault divisions each contain a four-battery Vulcan battalion (a total of 48 mounts). The independent battalions in an antiaircraft artillery group contain 24 Chaparral launchers and 24 vehicle-drawn Vulcan mounts.

For immediate protection of combat troops against attacks by low-flying threats, each tank, motorized rifle, infantry, and reconnaissance battalion, as well as divisional field artillery has a Redeye portable antiaircraft missile section, with a total of 68 launchers in an infantry division, 67 in a mechanized division, 72 in an armored division, 64 in an airborne division, and 62 in an airborne assault division.

Judging from reports in the foreign military press, air defense in the army corps is organized by the corps commander, while commanders of organic or attached antiaircraft units and the corps combat operations control center (COCC) air defense section directly participate in elaboration of concrete measures. As a rule, an Improved Hawk antiaircraft missile group and one or two Chaparral-Vulcan battalions are attached to the corps. The number of attached medium-range antiaircraft missile battalions is determined on the basis of one per division. Rear area air defense is based on employment of one or two Improved Hawk antiaircraft missile battalions and a like number of Chaparral-Vulcan antiaircraft battalions. The most important installations in this area can also be protected by a Nike Hercules battalion.

The air defense of combined units and units is planned on the basis of the corps commander's plan, while the immediate organization of protection of installations in the rear area is assigned to the headquarters chief of operations and the antiaircraft artillery section made available by the attached antiaircraft artillery group to the corps COCC. The principal targets to be protected against enemy airstrikes include the COCC, the Lance missile battalion, field artillery positions, reserves, and communications centers. An army corps operating in a separate sector away from the main forces may be reinforced by an antiaircraft artillery brigade or group. In such case the corps commander is responsible for air defense.

Divisional air defense is established in conformity with the plan of higher command authorities. General supervision of its organization is exercised by the divisional commander through his air defense chief (who is also a Chaparral-Vulcan battalion commander), who prepares, on the basis of the tactical plan, recommendations to the divisional commander on employment of organic and attached air defense assets. For example, they specify that the firing positions of the attached Improved Hawk antiaircraft missile battalion shall be disposed in such a manner that density of fire will be uniform in all directions. Organic battalion antiaircraft weapons are to be employed in a decentralized manner, incorporating its subunits (by battery or platoon) into the combat formations of the forward-echelon troops.

It is recommended that protection of command posts, combat formations of tank (motorized infantry) brigades, field artillery battalion weapon positions, and divisional ammunition, fuel and lubricant depots against attack by low-flying enemy fixed-wing and rotary-wing aircraft be organized by Chaparral or Vulcan batteries, or by composite platoons formed from these batteries. Tank (motorized infantry) battalions as well as independent armored cavalry corps operating in the corps security area may be assigned a Vulcan battery, while a composite Chaparral-Vulcan battery may be assigned to protect army airfields.

In the opinion of U.S. military experts, the principal mission of divisional air defense in the attack is protection of advancing units and subunits, with the objective of preventing or limiting the effectiveness of hostile air actions against them. It is noted that it is recommended for accomplishing this mission that Vulcan antiaircraft guns be attached to the attack-echelon brigades, with Chaparral antiaircraft missile systems employed for general support. In addition, the latter can be employed to protect command posts, field artillery positions, rear services installations, areas of terrain of paramount significance for successful troop advance, highway interchanges, etc. In the estimation of U.S. experts, such a distribution of the manpower and resources of the organic antiaircraft battalion can assist in reliably protecting troops against air attack and help them maintain the necessary rate of advance.

The Improved Hawk antiaircraft missile battalion, which provides protection to the division's units and subunits, would be employed to hit air targets at maximum distance from the combat formations of the troops assaulting the enemy's main positions. For this, battery firing positions are placed as close as possible to the advancing troops and in such a manner as to ensure the requisite protection of forward-echelon units and subunits as well as flanks. Resiting of battalion batteries and platoons in the course of combat operations is accomplished by leapfrog, which ensures continuous protection.

Close teamwork and cooperation is established between organic and supporting battalions as regards exchange of air situation information.

Redeye crews are employed according to the plans of the battalion commanders, for direct protection of troops against attacks by low-flying enemy aircraft.

In the defense, air defense is organized for the purpose of preventing tactical airstrikes on troop positions in the divisional main defended area and targets located at depth. U.S. military scientists believe that the available quantity of antiaircraft weapons in the division and their limited range of fire make it difficult to cover the entire defensive area with adequate density. It is therefore recommended that air defense be set up in such a manner as to provide reliable protection in the first instance for the most important targets: the defense areas of the forward-echelon brigades on the main axis of advance, command posts, reserve areas, etc.

General supervision of organization of air defense is handled by the divisional commander who, taking possible combat actions into account, determines the sequence and procedure of protection of troops and rear area installations.

Considerable attention is devoted to efficient employment of the Improved Hawk antiaircraft missile battalion, the subunits of which engage hostile aircraft from firing positions as close as possible to the FEBA but out of enemy artillery range. Organic antiaircraft weapons are employed to engage low-flying fixed-wing and rotary-wing aircraft.

U.S. Army command authorities believe that in order successfully to accomplish air defense missions during a combat engagement it is essential to observe the following basic tactical principles of employment of antiaircraft artillery personnel and weapons: massing, employment of mixed antiaircraft assets, unity of actions, and mobility.

The principle of massing presupposes concentration of principal antiaircraft artillery manpower and assets to protect the most important targets, with the objective of providing them with reliable air defense. In this case it is recommended that Improved Hawk antiaircraft missile subunits be not less than battalion strength, and not less than a platoon of Chaparral and Vulcan weapons. It is believed that massed fire is effective not only as a consequence of increased target kill probability. It also exerts a powerful psychological effect on aircrews and can force them to refrain from continuing their mission.

Massing of antiaircraft weapons to protect important installations, combined units and units which are carrying out the principal missions of the operation or battle can be accomplished by reducing the level of air defense of other combined units and units. Division support-echelon brigades, for example, as a rule do not receive antiaircraft assets from the organic Chaparral-Vulcan battalion. Or a division operating on the main axis of advance of the army corps may be given a corps support-echelon division antiaircraft battalion as attachment to reinforce air defense.

Employment of mixed antiaircraft assets, in the opinion of U.S. military experts, can substantially increase air defense efficiency and stability due to mutual compensation for the deficiencies of one weapon by the advantages of another. This principle is often implemented, for example, in forming mixed batteries of Chaparral-Vulcan battalion subunits, containing one or two Chaparral platoons and one or two Vulcan platoons.

The principle of unity of actions consists in close coordination of the plans of combat employment of antiaircraft artillery units and subunits with the plans and combat actions of army corps, ground forces divisions and brigades, tactical and army aviation. Chaparral-Vulcan and Improved Hawk battalion commanders, for example, directly participate in formulating the division's plan of operations, while the divisional commander is empowered to designate targets for protection coverage by the Improved Hawk battalion operationally subordinate to the air defense region commander.

In the estimate of the U.S. Army command authorities, mobility is the principal factor which ensures continuity of protection of combined units and units on the battlefield. It is achieved by employing highly-mobile antiaircraft weapons for protective coverage.

U.S. experts apply the principles enumerated above in formulating standard combat missions which antiaircraft artillery will perform in the course of combat operations. U.S. Army field manuals stress that in fire planning, antiaircraft artillery units and subunits may be assigned one of these missions: general support, general support and reinforcement, reinforcement, and direct support. The procedure of organizing teamwork and cooperation between antiaircraft artillery subunits and the covered ground forces combined units, units and installations, the nature of their protection, degree of subordination, etc are determined in conformity with this.

For example, an Improved Hawk battalion providing corps general support may at the same time protect command posts, Lance missile battalion positions, communications centers and important rear services units without being specifically tied to one concrete target. Protection is provided to force groupings and several targets indicated by the combined-arms commander when performing the general support and reinforcement mission, while the fire of the adjacent antiaircraft subunit (unit) is reinforced at the same time. Concentration of main efforts is determined by the combined-arms commander and the commander of the antiaircraft subunit being reinforced. The first part (general support) is of paramount importance in comparison with the second (reinforcement). In solving these problems selection of positions is made by the commander of the attached antiaircraft subunit (unit).

If the reinforcement mission is assigned, appropriate manpower and weapons are placed at the disposal of the commander of the antiaircraft subunit being reinforced, who assigns them fire positions and direction of concentration of main efforts, and also gives other instructions on organization of protection of troops, vehicles and installations in his zone of responsibility. The combined-arms commander determines the missions of the attached antiaircraft subunit outside the zone (sector) of responsibility of the antiaircraft artillery subunit being reinforced.

An antiaircraft artillery subunit which has been assigned the direct support mission should provide continuous air defense to the combined unit (unit, subunit) it has been assigned to protect. The commander of the combined unit (unit) being provided protection coverage determines the importance and coverage sequence of targets, while the commander of the direct support subunit selects positions and plans displacement of antiaircraft weapons, closely coordinating his combat actions with those items which are being handled by the supported combined unit (unit, subunit). Determination of targets to protect which are located outside the area of the supported combined unit (unit) is made by the senior combined-arms commander.

Matters of antiaircraft weapon fire control, judging from reports in the foreign press, are of great importance in organizing the air defense of combined units, units, and subunits. In the opinion of U.S. Army command authorities, the fullest and most efficient utilization of their combat capabilities can be ensured only with centralized control, exercised from the air defense zone (region) operations center. Collection and processing of data on the enemy's offensive air weapons, air situation evaluation and assignment of missions to weapons are based on the employment of automated fire control systems,<sup>4</sup>

located at the corresponding command posts, from which commands to commence fire are issued.

A decentralized mode of control is employed from an air defense region operations center in case of massive air attack or disruption of communications between antiaircraft missile battalions and batteries and higher control agencies.

In conclusion we should emphasize that U.S. Army command authorities are planning to bring onto ground forces operational status in coming years new models of antiaircraft missile systems and self-propelled mounts (for example, the Patriot and Roland-2 antiaircraft missile systems, the DIVAD antiaircraft gun system, etc) which, according to U.S. experts, should substantially increase the effectiveness of engagement of air targets and ensure reliable all-weather and high-mobility battlefield air defense to combined units, units, and subunits.

#### FOOTNOTES

1. According to the military terminology adopted by the U.S. Army, antiaircraft artillery, just as field artillery, includes combined units, units, and subunits armed with missile and gun systems -- Ed.
2. Air defense zone boundaries usually coincide with theater boundaries -- Ed.
3. For more detail on organization and combat employment of the U.S. Army Improved Hawk antiaircraft missile battalion, see ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, No 4, 1981, pp 33-38 -- Ed.
4. For more detail on automated antiaircraft artillery fire control systems, see ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, No 1, 1978, pp 44-48 -- Ed.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239



## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS ON PORTABLE RADIO EQUIPMENT OF NATO GROUND FORCES

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 35-42

[Article, published under the heading "Ground Forces," by Candidate of Military Sciences Engr-Lt Col V. Chistyakov: "NATO Ground Forces Portable Radio Sets"]

[Excerpts] As is noted in the foreign press, portable radio sets are the principal means of ground forces control at the lower echelons in the NATO bloc countries. In the battalions, companies and platoons they comprise 55, 85 and 95 percent respectively of organic radio communications equipment. With the aid of these radio sets, which operate in the command, rear services and combat support radio nets, continuous troop control is maintained in the immediate vicinity of the battle line (while moving), as well as when the employment of other means of communication is impossible due to terrain conditions or combat situation.

In recent years the importance of portable radio communications equipment has steadily risen, which is due, foreign experts believe, to the appearance in the troop organizational structure of new, highly mobile subunits armed with modern weapon systems and capable of independently performing important combat missions. Control of these subunits requires reliable communication with higher headquarters, as well as with cooperating troops in the theater in the conduct of joint operations by the armed forces of the NATO member nations. Therefore a number of common standard requirements have been formulated within the framework of the bloc, aimed at securing the joint functioning of radio communications equipment of the armies of the various countries at the various control echelons. They include uniform operating modes, specified operating frequency bands, and restrictions on equipment weight and size.

At the present time third-generation portable HF and VHF radio sets comprise the technical basis of the NATO forces control system at the tactical echelons. This equipment is completely solid-state. The former are single or double side-band (frequency range 2-30 MHz), while the latter are FM, with 5 kHz separation (30-88 MHz). Sure communication ranges have been determined for radio sets of both types, ranges which, depending on the class of equipment, should be 1, 3, 5, 8, and 16 kilometers. Maximum temperature values (from -40 to +55°C) at which reliable communications are ensured are also standardized.

Characteristic of third-generation portable radio communications equipment is a sharp reduction in size and weight of transceivers (approximately half to one third) in comparison with previous models. The weight of modern radio sets with nickel-cadmium batteries usually does not exceed 7.5 kg, while with more efficient silver-zinc batteries as power supply, weight can be reduced to 6 kg. The considerable weight and size reduction provides the possibility of further design and operation improvement of portable equipment.

Equipment design incorporates analog-to-digital converters and coders, which makes it possible to transmit in digital form and simplifies scrambling messages. A large number of VHF sets at all command and control echelons, including the lowest, can operate in scrambling mode. Conventional frequency synthesizers are replaced by more sophisticated digital units, while mechanical high-frequency filter tuning components have been replaced by electronic circuits with variable-capacitance diodes, and the continuous tuning dial has been replaced by digital tuning. All this, in the opinion of foreign experts, has improved the accuracy of frequency tuning and has shortened communications initiation time. Broadband antennas have also been developed, as have automatic antenna tuning circuits, which has made it possible to reduce the number of equipment tuning operations and the number of controls. Communications initiation time when changing frequency has been reduced to 2 seconds.

In order to simplify servicing and repair under field conditions, today's portable radio equipment is designed in functional modules connected by special contact devices in place of vulnerable hookup wire. Each module is equipped with a malfunction indicator and, when a malfunction occurs, can be replaced in minutes. In the opinion of foreign experts, this design, in combination with extensive utilization of large integrated circuits and thin-film technology, as well as replacement of all mechanical and electromechanical (relays) controls with electronic circuits and microprocessors, makes it possible substantially to improve the reliability of modern portable radio communication gear. At the present time, promising backpack radio sets are characterized by a high degree of reliability (mean time between failures runs 4000-5000 hours, and up to 10,000 hours for some portable transceivers).

The basic specifications of the radio communications gear employed by the ground forces of the various NATO countries are quite similar, since as a rule common standards are applied in their design and development. Differences in technological base and level of development of the electronics industry, however, have resulted in certain differences in the design and performance characteristics of the equipment manufactured by the various countries (see table) [table omitted].

Judging from materials in the foreign military press, there is taking place in the NATO countries a continuous process of reequipping ground forces with new tactical radio communications gear, and an increasingly more important role is being assigned to portable radio sets. Particular attention is being focused on designing and building equipment capable of ensuring continuous troop control in conditions of intensification of electronic warfare.

In addition, adaptive equipment has now been developed which automatically changes the radiated signal level and operating frequency in relation to change in quality of the communication channel. Radio sets are being designed which offer stepwise change in operating frequency in a pseudorandom pattern, at a rate of up to 2000 times or more per second. Portable radio sets are being developed which ensure secure troop control in the immediate vicinity of the enemy, by employing devices which make it possible to conduct radio communications in a whisper. Testing is being conducted on portable satellite communications radio sets (the U.S.-built AN/PSC-1, Figure 12) [not reproduced], to be used at various armed forces control echelons.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS ON WESTERN ARMORED REPAIR AND RECOVERY VEHICLES

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 42-46

[Article, published under the heading "Ground Forces," by Engr-Lt Col N. Fomich: "Armored Repair and Recovery Vehicles"]

[Excerpt] Alongside equipping ground forces with new models of armored vehicles, the armies of the capitalist countries attach considerable importance to maintaining the battleworthiness of tank units and combined units which, in the opinion of foreign military experts, can be achieved with appropriate organization of repair and recovery of armored equipment in field conditions. Toward this end tank maintenance subunits should be furnished first and foremost with repair and recovery equipment, have well-trained personnel, and have the requisite quantity of repair parts.

The armies of foreign countries employ armored repair and recovery vehicles (ARRV) for battlefield recovery of disabled tanks, infantry fighting vehicles, armored personnel carriers, self-propelled artillery, as well as for repair and maintenance of equipment and performance of load-lifting and simple earth-moving activities. As a rule they are based on tanks and armored personnel carriers. Their basic equipment includes a crane or crane boom, heavy winches, towing gear, takedown, assembly, and intrenching tools. A plowshare is mounted on the front of some ARRV, used to perform earthmoving or as a stop when extricating bogged-down armored vehicles.

Usually ARRV are armed with 7.62 or 12.7 mm machineguns (a Swedish vehicle, which carries a 20 mm automatic gun, is an exception). In addition, grenade launchers are mounted on some models, for laying smoke screens, and protection is provided to personnel against the effects of mass destruction weapons. All vehicles are equipped with radio communications gear. The performance characteristics of ARRV used in foreign armies are contained in the table [not reproduced].

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS ON U.S. STRATEGIC AIR COMMAND EXERCISE 'GLOBAL SHIELD'

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 47-50

[Article, published under the heading "Air Forces," by Candidate of Technical Sciences Engr-Col V. Pokrovskiy: "'Global Shield' Exercise"]

[Text] A special place in the unchecked arms race which has been pursued in recent years by the United States is assigned to a buildup in the power of strategic arms -- the main instrument in achieving U.S. expansionist goals. Strategic offensive forces, in the view of U.S. military and political leaders, are the cornerstone of contemporary U.S. strategy and the foundation of U.S. military might. In peacetime their task is to support implementation of a policy "from a position of strength," while in time of war their mission is to destroy the enemy.

Preparation of U.S. strategic offensive forces for combat employment under various situation conditions is being carried out proceeding from these aggressive aims. In order to maintain their readiness for nuclear war, the United States has developed a comprehensive system of command and staff as well as field troop exercises, at which operational plans for waging combat are regularly rehearsed and the professional proficiency of personnel improved.

A special place in this system is occupied by U.S. Air Force Strategic Air Command (SAC) exercises code-named "Global Shield." This command, judging from reports in the foreign press, combines two major components of U.S. strategic forces -- intercontinental ballistic missiles (ICBM) and strategic bombers. In addition, it includes strategic reconnaissance aircraft, aerial tankers, and aircraft of the backup national armed forces combat command and control system -- airborne command posts (ACP).

The first "Global Shield" exercise was held in July 1979, and they have been held annually since that time (June 1980, January-February 1981). It is noted in the Western press that in scale, scope, duration, number of personnel and amount of equipment, as well as volume of missions they exceed all previously conducted measures pertaining to the operational and combat training of U.S. Air Force SAC combined units, units and subunits.

Foreign observers stress that U.S. military and political leaders have from the very outset not concealed the fact that these exercises pursue not only military goals but also have a clearly marked political thrust -- extensively to display the power and capabilities of U.S. strategic offensive forces and their capability to operate in various situation conditions and in any part of the world.

According to official statements by the Strategic Air Command, the "Global Shield" exercises are for the purpose of testing the actual readiness and capability of ICBM combined units and units and strategic bombers to perform their assigned missions specified by plans for the conduct of military operations of any scale, right up to a nuclear world war.

According to reports in the Western press, virtually all SAC forces, individual units and subunits of the Air Force Reserve, Tactical Air Command, Military Airlift Command, and Air National Guard (a total of approximately 100,000 men) are involved in these exercises. At each exercise U.S. command authorities stress accomplishment of four principal tasks:

- improvement of the combat proficiency of participating SAC aircrews, ICBM launch control teams, and personnel of service, logistical support, communications subunits and other types of support in various combat situation conditions;

- testing of the feasibility of SAC operational plans and tactics in conditions maximally approximating actual combat, with the objective of determining recommendations for refining and detailing them;

- working on practical teamwork and cooperation of units and subunits within SAC, as well as with other commands;

- verification of the proficiency of SAC personnel, their combat readiness and capabilities.

According to a statement by the commander in chief of SAC, these tasks can be accomplished only by observing a basic principle -- creation of a situation in the course of an exercise which maximally approximates actual combat (within the limitations of peacetime and safety regulations). At the same time it is characteristic that ICBM and strategic bomber personnel and equipment on alert status do not take practical part in the exercises, but operate conditionally and maintain the combat readiness specified by the Pentagon for the given moment.

Each exercise is preceded by a protracted preparatory period, during which the scenario is worked out and the composition of participants and their training missions are determined. As U.S. military experts note, the general plan and operational-strategic background are formulated taking into account the actual world situation. In particular, events in the Near and Middle East and in other parts of the world were considered in the three exercises which have been held up to the present time.

As is reported in the foreign press, year by year U.S. military leaders are expanding the scale of these exercises, the number of participants and exercise areas. For example, in 1979 approximately 650 aircraft from 31 air bases took part, in 1980 -- 700 aircraft from 42 bases, and in 1981 -- 800 aircraft from 70 bases, including approximately 350 B-52 heavy bombers (Figure 1) [not reproduced], 65 FB-111 medium bombers, a large number of KC-135A aerial tankers, RC-135, U-2, and SR-71 strategic reconnaissance aircraft (Figure 2) [not reproduced], airborne command posts, etc.

"Global Shield" exercises are of a combined nature. For example, according to a statement made by the commander in chief of SAC for the U.S. press, the following basic elements are worked on during these exercises:

- dispersing of strategic bombers to alternate airfields (including civilian) and preparation for performing combat missions;

- performance of airborne alert duty by B-52 and FB-111 bombers in specified areas;

- launching of nuclear strikes (simulated) by ICBMs and bomber aircrews on targets located on the territory of the potential adversary;

- deployment and evaluation of the operating effectiveness of the backup command and control system from airborne command posts;

- organization of reconnaissance flights to conduct air reconnaissance in support of the exercise;

- execution of simultaneous takeoff of a large number of bombers and tankers at the command of the top-echelon command authority;

- working on servicing personnel procedures in aircraft turnaround for additional sorties;

- working on problems of maintaining security and correcting emergency situations which may arise at SAC bases in nuclear-war conditions;

- holding auxiliary (particular) exercises to evaluate the capability of command and staffs at all levels efficiently to control their subordinate manpower and equipment;

- appraisal of accomplishment of combat training programs by aircrews, ground support and security subunits.

All these items are regularly worked on at each "Global Shield" exercise, and in some cases additional elements are added. Within the framework of this exercise in 1981, for example, a part of the SAC forces operated during the first 10 days in conditions of outbreak of a nonnuclear conflict in a region distant from U.S. territory. The B-52 bombers assigned to this mission flew over a sparsely populated area of the state of Nevada and delivered simulated and actual strikes on bombing ranges in the area, while all remaining SAC forces were in a routine state of combat readiness and conducted initial mobilization measures.

In the opinion of the U.S. Air Force Strategic Air Command, dispersing of strategic bomber forces is one of the most important practical elements worked on at such an exercise. During the 1979 "Global Shield" exercise, approximately 100 strategic bombers disperse-deployed at alternate military and civilian airfields, while their number increased to 150 in subsequent years. At the same time, technical personnel of ICBM units and subunits were being airlifted to areas distant from their regular bases. Judging by reports in the foreign press, dispersing aircraft fly as a rule at low altitudes, and immediately after completing transit, bomber and tanker crews would proceed to stand alert duty at the new field.

As noted above, during these exercises considerable attention is devoted to bomber aircrews working on standing airborne alert. The routes followed by the alert aircrews passed over Canada, Alaska, and Atlantic coastal waters. In addition, aircrews worked on problems of penetrating "hostile" air defense and made bombing runs, with the duration of flights to the simulated targets approximated by keeping the bombers airborne in special zones.

American military leaders assign a central place in the "Global Shield" exercises to a mass takeoff by strategic bombers on a special signal from the SAC command center. In particular, according to a report in the Western press, at the 1981 exercise more than 400 aircraft took to the air within a span of 10 minutes (aircraft operating from the same airbase were taking off at an interval of 12-30 seconds).

Each year during this exercise, operational Minuteman ICBMs are launched from Vandenberg Air Force Base, using missiles taken from launch silos at ICBM bases on alert status. In 1979, for example, two Minuteman III ICBMs were launched at a 12-second interval, one was launched in 1980, and two in 1981. In addition, in 1979 a Minuteman II ICBM was launched by a command issued from an aircraft carrying equipment for airborne missile launch control. The missile carried equipment of a special communication system designed for command and control of strategic forces in an emergency situation, by transmitting orders from the highest military command authorities to combat-ready forces in case normal communication channels become disabled. This equipment is contained in the nose cone of a Minuteman II rocket and consists of a magnetic recording device and radio transmitter, which continuously transmits coded instructions in telephone mode for a period of 20-30 minutes.

At the concluding stages of the exercise, command and staff drills are usually conducted at all levels of command and control, drills on handling nuclear weapons and safety procedures, and personnel work on readying for another sortie aircraft returning from a combat mission, on neutralizing the results of nuclear strikes, and on repairing communications equipment.

U.S. military and political leaders seek to conceal the true nature and thrust of the "Global Shield" exercises, justifying the need to hold such exercises with a lie about the "growing threat by the Soviet Union." Even the U.S. press admits, however, that the purpose of these exercises, their constantly increasing scale and the substance of the conducted activities constitute undisguised practical preparations by the United States to wage a nuclear world war and constitute a show of force.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981



PERCEPTIONS, VIEWS, COMMENTS

COMMENTS ON NATO FLIGHT SUPPORT RADIONAVIGATION SYSTEMS

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 55-60

[Article, published under the heading "Air Forces," by Engr-Col S. Borisov: "Aircraft Flight Operations Support Radionavigation Systems"]

[Excerpt] Successful employment of combat aircraft, in the opinion of foreign military experts, is impossible without proper navigation support. It enables aircrews to determine in flight such essential data as the aircraft's position, course, altitude and ground speed, track, relative bearing to and from a selected radio beacon, and distance to destination point (target, destination field). Both airborne and ground navigation equipment is used to obtain this information. The latter includes radionavigation systems which are differentiated by area of application, operating principle and range, accuracy of determination of navigational data, as well as complexity and size-weight specifications.

Judging from reports in the foreign press, the air forces of the NATO nations are presently using the following for navigation en route, in the target or destination area, and for landing approach: U.S.-built TACAN, VORTAC and LORAN-C radionavigation systems, ADF, and UHF radio direction finders. In less widespread use are the U.S.-built Omega and British Decca very-low-frequency systems. LORAN-D system networks are deployed in the Central European theater and in the U.S. Southeast. VOR VHF omnidirectional beacons and DME distance-measuring facilities are widely used during operations in areas offering civilian aviation navaids.

We present below information contained in the foreign press on aviation navaid systems which are in the most widespread use abroad.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS ON NATO VIEWS ABOUT MINE WARFARE IN BALTIC

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 63-66

[Article, published under the heading "Naval Forces," by Capt-Lts V. Ovsyanikov and A. Kolpakov: "Views on Employment of Mine Weapons in the Baltic Straits Zone"]

[Text] Contrary to the demands of the peoples of the world that the policy of détente be continued, ruling circles in the United States and other leading NATO countries are openly pursuing a policy of aggravating the international situation, of escalating the arms race and gaining military superiority over the Soviet Union.

An important place is assigned to the Baltic and the North Sea in NATO plans to intensify militarist preparations. NATO leaders, judging from reports in the foreign press, are focusing close attention on this region. They believe that in present-day conditions the success of combat operations in the European theater will depend to a significant degree on maintaining control of the western part of the Baltic and the straits zone. The Baltic straits are viewed as a special strategic axis which in case of war will become an arena of combat operations by all branches of service. Therefore it is no mere coincidence that in 1962 a Baltic straits zone NATO Joint Forces command was established.

Judging from materials in the foreign press, the area of "responsibility" of this command encompasses Denmark, Schleswig-Holstein in the FRG, the southwestern part of the Baltic Sea (to the 16° meridian, east of the island of Bornholm), the straits zone, as well as the eastern part of the North Sea. The western boundary runs along the 5° meridian (Lindesnes on Norway's southern coast) to the coast of the FRG.

According to reports in the Western press, the principal missions of the NATO Joint Forces in the Baltic straits zone include maintaining control of the straits zone, antiamphibious defense of the coastline of the FRG and Denmark, disruption of the enemy's sea lines of communication in the Baltic, as well as protection of friendly lines of communication in the straits zone and in the eastern part of the North Sea. A primary role in accomplishing these missions is assigned to joint naval forces.

As is stressed in the foreign press, more than 250 warships and combatant craft of the naval forces of the FRG and Denmark, as well as up to 140 FRG naval aviation aircraft are to be assigned to NATO joint naval forces. If necessary, NATO joint naval forces in the Baltic straits zone can be reinforced with warships and submarines of the Norwegian Navy.

NATO military experts define maintaining control of the straits zone as an aggregate of measures to deny egress from the Baltic to the North Sea to enemy warships, weakening and destroying enemy naval forces in the Baltic, thwarting amphibious landing operations on the Danish islands, as well as disruption of the enemy's Baltic lines of communication. Combat operations will have specific features due to the physical-geographic peculiarities of this region.

The Baltic Sea stretches 750 miles from north to south, and 350 miles to east to west. Its heavily indented coastline forms numerous bays and inlets. Approximately 60 percent of the sea's area is at depths of 50 meters or less, while only 12 percent contains depths of greater than 100 meters. In the northern part of the Baltic the seafloor is rocky and uneven, while in the southern part it is sand-clay and smooth. The Baltic Sea has virtually no tides. Tides at Copenhagen, for example, do not exceed 0.21 meter.

The straits zone linking the North Sea and the Baltic is one of the most important areas of this theater. It is a narrow, shallow-water passage between the Jutland and Scandinavian peninsulas, favorable for establishment of a defense disposed in depth. The zone includes the Sound, the Fehmarn Belt, the Great Belt, the Little Belt, the Kattegat, and the Skagerrak. The Sound (60 miles in length, 2-13 miles wide) is 12-20 meters in depth to the northeast of Copenhagen, and 5-7 meters to the south. Two channels, with depths of 7.2 and 8 meters, have been dredged through the southern part. The Fehmarn Belt separates island from mainland, with a strait 10 miles in width. The Great Belt is the deepest-water passage out of the Baltic. It is approximately 65 miles in length and 6-14 miles wide. The greatest channel depth is 16 meters. The Little Belt is more than 70 miles long and ranges from 0.4 to 12 miles in width, with a minimum channel depth of 11 meters. The Kattegat and Skagerrak offer the least problems to navigation. They are 110 and 160 miles in length respectively, 23-67 and 60-70 miles wide, with depths of 30-50 and 70-800 meters respectively.

In the estimate of Western military experts, the geographic peculiarities of the Baltic Sea and its straits favor the conduct of blockade and actions in the strait zone with the objective of thwarting military shipping and preventing passage of hostile naval forces into the North Sea and the Northeastern Atlantic. At the same time, the short distance from the adversary's coast and airfields sited there limits possibilities of employing large forces of surface units in the open areas of the Baltic Sea. It is therefore considered advisable to conduct aggressive combat operations on the Baltic and on the approaches to the straits with light forces (guided missile and torpedo-armed patrol combatants), submarines and aircraft, with massive employment of mines. Mines are viewed by the Baltic straits zone NATO joint naval forces command authorities as one of the most effective means of combating the enemy in this area. In the estimate of foreign military experts, sea mines possess a high degree of combat stability and are capable of destroying submarines and surface

units, of presenting a protracted and continuous threat to the enemy, and of exerting enormous psychological effect on enemy personnel.

The experience of past wars indicates that in no other theater was the mine situation so complex as in the waters of the Baltic Sea and straits zone. A total of more than 69,000 mines were laid here in World War II alone. In certain areas minefield density ran 200-300 mines per square mile.

As was reported in the foreign press, control of the approaches to the straits zone would be gained by means of determined offensive and defensive actions, initially in the waters of the Baltic Sea. These actions will seek to destroy hostile surface and undersea forces penetrating toward the straits zone and to force them into the southeastern part of the Baltic, with subsequent maximum restriction to freedom of action, by laying minefields in the vicinity of naval bases, on routes of deployment and at concentration sites during preparation to execute amphibious landing operations.

According to information in the foreign press, minelaying in the Baltic will be accomplished chiefly by submarines, air force and naval aircraft of the FRG and Denmark, as well as by surface units and civilian vessels. Minefields can be laid both in advance, prior to commencement of combat operations, and during hostilities.

The geographic and hydrologic conditions of the Baltic Sea favor effective employment of mines over virtually the entire sea area. In view of the shallow sea depths, the Baltic straits zone NATO joint naval forces command authorities plan to employ principally bottom influence mines, with magnetic, induction-acoustic, and pressure firing mechanisms, equipped with delay arming mechanisms, ship counting devices, and antisweeping devices. Numerous shoals and sandbanks, in which this region abounds, dictate strictly regulated paths of movement for warships and other vessels, which in turn increases the effectiveness of mines.

If the initiative is lost when seeking to gain domination on the straits approaches, as well as in case of an increased threat of enemy capture of the Danish islands and loss of the straits, plans specify laying defensive minefields on the approaches to potential amphibious assault objectives on these islands and on the approaches to the West German coast and, in addition, in the areas of approach to the straits southeast and west of the island of Bornholm. Plans call for subsequent blocking of the Baltic straits by means of massive minelaying.

The employment of mines, as is emphasized in the Western press, pursues the objective of containing attacking enemy forces and preventing the landing of tactical and operational-tactical assault forces on islands which occupy key positions on the approaches to and directly in the straits zone. Plans for defensive minelaying in these areas call for employing seven minelayers, more than 50 minesweepers, and a substantial percentage of the warships and patrol combatants, shore-based patrol and tactical aircraft of the naval and air forces of the FRG and Denmark, as well as carrier-based aircraft from NATO's Atlantic strike fleet and U.S. Air Force B-52 strategic bombers. Military cargo ships and civilian vessels, and even railway and automobile ferries, specially refitted for these activities, can be employed in performing this mission.

In the estimate of Western military experts, Danish and FRG naval forces have a substantial supply of mines, and an extensive system of mine storage close to probable minelaying areas makes it possible to disperse minelayers and other minelaying ships among the various depot points, quickly to load mines on board and to block the straits zone within a limited period of time.

As is indicated in the foreign press, in certain straits, including the Great Belt, the Little Belt and Sound, plans call for advance, prior to commencement of combat operations, laying of shore-controlled minefields, which would be used to destroy enemy warships penetrating through these areas.

In the opinion of NATO command authorities, blocking the Baltic strait zone will make it possible to gain time and to reinforce the defending NATO force on the Danish islands and on the Jutland Peninsula by sealifting reinforcements from other theaters, as well as by maneuver of forces within the straits zone. In case enemy ground forces break through defensive lines in Schleswig-Holstein or in case of loss of the Danish islands, according to reports in the foreign press, plans call for withdrawing remaining warships of the West German and Danish navies from the straits zone and mining the Kattegat and Skagerrak, with subsequent minelaying in the North Sea as well, particularly in its eastern part.

The physical-geographic conditions of the North Sea, just as of the Baltic, are favorable to minelaying. Depths increase smoothly from 20-30 meters in the south to 200 meters in the north. An exception is the Norway trench, where depths reach 800 meters. Seafloor relief is uneven. The sea contains many sandbanks, shoals, and narrow troughs. The largest sandbank, Dogger Bank, is from 14 to 18 meters from the surface. The coastline is little-indented. Ports and naval bases can be approached only by channels. Water depths in the principal ports range 5-10 meters, while depths along entrance channels and recommended courses range from 7 to 50 meters.

All this on the one hand facilitates employment of mines against enemy surface units and submarines, while on the other hand it will hamper friendly fleet actions in case the enemy employs these same weapons.

Judging from materials in the Western press, in the initial period of a war, plans call for limited employment of mines in the North Sea, chiefly for defense of naval bases, ports, and offshore oilfields. Individual minefields and mine clusters can be placed on probable routes of movement of enemy submarines.

Planning to employ mines aggressively in the conduct of combat operations in the Baltic and North seas, NATO military and political leaders are allocating considerable funds for their development and manufacture. As was reported in the foreign press, the naval forces of the FRG and Denmark employ primarily U.S. and British mines dating from the 1950's and 1960's, such as the Marks 25, 36, 50, 52, IV, V, and others. In recent years mines of domestic design have been intensively developed and are currently being manufactured in quantity, particularly in the FRG -- UMS and G1. NATO member nations extensively exchange information, systems and devices, and coordinate scientific research.

This is confirmed by cooperation between Denmark and the FRG in development of the SA1 and SGM80 mines. Principal attention in research and development activities is devoted to mines which can be laid from a variety of platforms, to increasing their resistance to sweeping, as well as to standardized systems of firing mechanisms and anticountermining devices.

While planning aggressive employment of mines in combat operations in the Baltic and North seas, NATO command authorities at the same time attach great importance to development of minelaying platforms. Plans call for employing in aggressive minelaying not only FRG and Danish naval and air forces, but also forces of other countries -- Norway, the Netherlands, Great Britain, and the United States. These include shore-based aircraft adapted for minelaying: Orion (Norway and the United States), Nimrod (Great Britain), Atlantic (Netherlands); British Buccaneer light bombers, as well as carrier-based Intruder, Corsair, and Viking aircraft from U.S. aircraft carriers deployed in the North Sea, and U.S. Air Force B-52 strategic bombers. In addition, military transport aircraft of the above-named countries can also be used in minelaying.

The Baltic and North seas are well provided with navigation aids. Their radionavigation aids (radio beacons and Omega, LORAN, Decca, SHORAN, TACAN, ("Reydist")), and in certain cases illumination as well (lighthouses and lightships, illuminated markers, buoys and spar buoys), make it possible to lay mines with a high degree of precision in adverse weather conditions. The ("Reydist") system, for example, enables one to determine position with an accuracy of 5 meters at ranges up to 250 miles, which makes it possible to lay minefields on approaches to naval bases and ports.

In order to achieve maximum effective employment of mines, NATO naval command authorities devote considerable attention to development of common tactics. It has been stressed in the foreign press that they have established a special working group to formulate general principles of employment of mines in maritime theaters and are constantly working on these problems in the course of numerous fleet exercises conducted by national navies and NATO naval forces, such as "Teamwork," "Northern Wedding," "Blue Harrier," "Bright Horizon," "Botany Bay," and others.

All this constitutes clear confirmation of the intentions of the NATO bosses extensively to utilize mines in combat operations in the Baltic straits zone.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS ON U.S. SUBMARINE LOGISTICAL SUPPORT IN PACIFIC

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 66-68

[Article, published under the heading "Naval Forces," by Capt 2d Rank G. Perov: "'Ohio' Class SSBN Logistical Support System in the Pacific"]

[Text] Hiding behind demagogic expatiations about "the desirability of restraining arms growth," the Reagan Administration is pulling the stops out on implementing an unprecedented arms buildup program. Special emphasis is being placed on further development of strategic offensive forces, the most important component of which are nuclear-powered ballistic missile submarines.

As is noted in the foreign press, the Pentagon attaches paramount importance to construction of new "Ohio" class SSBNs, which are the foundation of the Trident sea-launched nuclear missile system, and devotes considerable attention to providing them at basing locations on the North American continent with servicing and maintenance facilities, training centers, supply depots, missile arsenals, and test ranges. It is also stressed that boats assigned to operations in the Northeastern Pacific will be based at the naval facility at Bangor, Washington.

According to reports in the foreign press, the search for a location on the U.S. Pacific Coast most suitable for basing "Ohio" class submarines began in 1970. The decision to build a naval base at the town of Bangor on the western shore of the Kitsap Peninsula (between the Hood Canal and Puget Sound) on the territory of the existing Polaris and Poseidon missile arsenal and a torpedo station, however, was not made until 1973, and approved in 1974. This choice was predetermined by the following factors: this location was sufficiently distant from probable hostile ASW forces deployment areas, deep water (to 90 meters) immediately offshore, good protection toward the sea, temperate climate and relatively sparse population.

Base construction began at the end of 1974, and it was officially commissioned in July 1981, although final completion of construction is scheduled for 1984. The 17th SSBN Squadron of "Ohio" class boats will be based at this facility (10 units).

According to reports in the U.S. press, Bangor is to become the foundation of the logistic support system for these SSBNs. Its composition and structure were designed proceeding from the necessity of providing these submarines with a higher (than that of existing boats) combat utilization factor by extending their time on patrol, shortening turnaround time between patrols and time required for major overhauls, as well as increasing time between overhauls. "Ohio" class SSBNs, as was stressed in the foreign press, will spend 70 days on patrol and 25 days in base readying for the next patrol (the figures are 60 and 30 days respectively for the "Lafayette" and "Ethan Allen" SSBN classes presently in service). Time in base, covering a strictly defined aggregate of time-limited measures, will include the following: off-loading some of the missiles following return from patrol (24 hours), drydocking and maintenance between cruises (18 days), shakedown following maintenance and repairs (2 days), correction of problems discovered during these trials (2 days), loading missiles (1 day), degaussing and measuring noise level (1 day).

A characteristic distinction in the performance of activities between patrols in comparison with currently operating SSBNs is the active involvement of the personnel of both crews in repair and maintenance.

U.S. experts believe that this organization of maintenance and turnaround procedures between patrols will make it possible to have no fewer than seven submarines on patrol at all times, while three SSBNs will be in base for maintenance. The tight schedule of maintenance and turnaround procedures between patrols and employment of crew members to perform these procedures will impose more rigid demands on submarine crew combat training and rest while in base, as well as on providing quarters. Therefore the composition and structure of the logistic support system at Bangor must create optimal conditions for submarine docking, repair and maintenance, missile and torpedo supply, personnel training, housing and facilities for the families of the members of 20 crews.

The facility occupies a site totaling more than 30 square kilometers in area. It includes the following: maintenance and docking complex, missile arsenal, training center, administrative building, and housing.

The maintenance and docking facility (Figure 1) [not reproduced] is a delta-shape structure and consists of two piers each 210 meters long, extending out into the water and connected to shore by two access roads on piles, with a drydock 270 meters in length and 83 meters wide. Sited at the center of the facility on a rectangular platform is a 500 square meter administrative and technical building which houses squadron headquarters in addition to shops.

The maintenance and repair facility is divided into two areas: a work area, and a storage area. Work involving maintenance and repair on assemblies and mechanisms, electrical, electronic and sonar equipment, periscope adjustment and alignment, machining of metals and plastics are performed in the first area, while spare parts and specialized equipment and modules for on-board equipment are stored in the second area (in a semiautomated warehouse). The warehouse is computer-equipped, which makes it possible substantially to speed up the procedure of finding needed materials and parts.



All kinds of repair and maintenance operations will be performed at the maintenance and docking facility, with the exception of recharging the nuclear reactor core, which is designed to operate for more than 9 years. It is to be replaced at the Puget Sound Naval Shipyard. Maintenance and repair of SSBNs will be handled by approximately 1500 specialists, 40 percent of whom will be military personnel.

Operations at the missile arsenal, according to reports in the Western press, will include final assembly of Trident I missiles, in addition to missile servicing and storage. Shops and storage facilities, sited at a safe distance from one another, have been constructed on the base for this purpose.

A special explosion-safe berthing location has been built for on-loading and off-loading SSBN ordnance (Figure 2) [not reproduced], with a covered shelter (100 x 60 x 44 meters) permitting operations in any weather. The pier is equipped with a 120 ton traveling crane.

The training center is situated on shore, in the largest building on the base (more than 27,000 square meters), and is intended for training officer and noncommissioned officer personnel of all specialties. It is furnished with actual equipment and automated mock-ups, which make it possible to study and master practical skills in conditions close to actual combat, both on existing and future SSBN equipment. The center provides individual and group training of submarine crewmen and maintenance specialists, as well as full-crew training problems. Up to 1000 men can train here simultaneously in 260 specialties. The base authorities believe that this will ensure prompt replacement of that portion of personnel leaving service or transferring to shore duty with well-trained specialists. As was noted in the U.S. press, after returning from a patrol, it will be necessary to replace on each crew an average of 20-25 percent of officers and noncommissioned officers. Approximately 300 men in 100 specialties are presently undergoing training at the training center.

Base housing is to accommodate approximately 4800 military personnel and 2800 civilian specialists involved in SSBN operation and support, as well as their families. According to reports in the Western press, 5764 persons were residing there in January 1981, with the number to reach a maximum level of 9200 by 1988.

17th SSBN Squadron Headquarters was established and commenced operations in January 1981. New boats will join this squadron as they are commissioned. Arrival at Bangor of the lead boat, the "Ohio," is expected not earlier than March 1982, and in the meantime, in order to coordinate teamwork and cooperation of all base services and to boost the qualification level of servicing personnel, some of the Polaris submarines, which have been reassigned to general-purpose forces, will be based there, and maintenance and repairs will be performed on auxiliaries.

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

## PERCEPTIONS, VIEWS, COMMENTS

### COMMENTS ON U.S. SHIPBUILDING CAPABILITIES

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 69-77

[Article, published under the heading "Naval Forces," by Col V. Grenkov: "Shipbuilding in the United States"]

[Text] The United States possesses the largest naval forces in the capitalist world, which totaled as of 1 July 1981 approximately 420 combatants and almost 160 auxiliaries. U.S. imperialist circles, however, pursuing a policy of an unchecked arms race and considering the Navy to be one of the principal means of carrying out their aggressive schemes, are endeavoring to achieve a further increase in the size of their fleet.

As a result of measures undertaken by former U.S. President Carter, plans called for increasing the number of U.S. warships to 550 by the mid-1980s.

The Reagan Administration, following a policy of further aggravation of the international situation, considers the scale of this shipbuilding program inadequate and has set out to increase in the near future the total number of ships to 600, with plans to increase the number of aircraft carriers to 15. As an augmentation to the previously approved shipbuilding programs for the 1981 and 1982 fiscal years, Reagan submitted to Congress a request for an additional 4.2 billion dollars to finance the construction of a nuclear carrier, a nuclear-powered attack submarine, a guided missile cruiser, two guided missile frigates, for refitting and reactivating the carrier "Oriskany" (CV-34) and the battleships "Iowa" (BB-61) and the "New Jersey" (BB-62). It is proposed that the combat capabilities of these battleships be increased by arming them with Tomahawk cruise missiles, the Mk 15 Vulcan-Phalanx 20 mm anti-aircraft artillery system, modern radars, helicopters, and VTOL aircraft. It will cost approximately 500 million dollars to refit each of these ships. Plans originally called for financing in 1982-1986 the construction of 113 combatants and auxiliary vessels.

Even this, however, seemed insufficient. The Reagan Administration intends to continue focusing paramount attention on building up the power of its naval forces. The shipbuilding program for the 1983-1987 fiscal years which is being drawn up by the Department of the Navy calls for appropriations for the construction of 143 new warships and auxiliary vessels, including two nuclear

carriers, 17 "Ticonderoga" class guided missile cruisers, 6 "Spruance" class destroyers, 9 frigates, etc. Further into the future, U.S. military and political leaders plan to increase the total number of warships to 770 by 1997.

Execution of plans to build up naval potential is fostered by the existence of a highly developed shipbuilding industry in the United States. During World War II it delivered to the Navy in less than 4 years approximately 1500 warships and auxiliary vessels and more than 5600 merchant vessels. In spite of the fact that today's warships are much larger and carry more complex equipment, this industry, in the estimate of foreign experts, continues to possess adequate production capability. There are in the United States approximately 220 large and medium shipbuilding and ship repair enterprises, both government (Navy) and private.

Naval shipyards are under the administration of the Department of the Navy. At the present time there are eight naval shipyards in the country (four on the Atlantic Coast and four in the Pacific zone), at which 57,600 persons were employed at the beginning of 1980. Facilities on the Atlantic Coast include the Portsmouth Naval Shipyard in Portsmouth, New Hampshire; the Philadelphia Naval Shipyard in Philadelphia, Pennsylvania; the Norfolk Naval Shipyard in Portsmouth, Virginia; the Charleston Naval Shipyard in Charleston, South Carolina; and in the Pacific zone -- the Puget Sound Naval Shipyard in Bremerton, Washington; the Mare Island Naval Shipyard in Vallejo, California; the Long Beach Naval Shipyard in Long Beach, California; and the Pearl Harbor Naval Shipyard in Pearl Harbor, Hawaii.

Since 1968 these enterprises, which possess substantial production facilities for extended-series construction of both surface units and submarines, have been used only for repair and maintenance, refitting and modernization. In 1980 they handled 66.5 percent (in dollar terms) of the entire volume of repair and maintenance performed for the Navy at U.S. shipyards, estimated at 3 billion dollars. In the period 1979-1980 government facilities performed repairs and maintenance on 69 warships and auxiliary vessels.

Usually naval shipyards handle the most complicated ship repairs. The largest of these (Norfolk Naval Shipyard and Puget Sound Naval Shipyard) are capable of modernizing, refitting and repairing warships and auxiliary vessels of all types. The facility in Bremerton, for example, which employs a workforce of 10,000 persons, scheduled in the 1981 fiscal year major overhaul of an aircraft carrier, three submarines, three destroyers, and an amphibious landing ship. In the 1982 fiscal year the schedule calls for repairs on another aircraft carrier, three submarines, a cruiser, two destroyers, and several other warships and auxiliary vessels.

The other shipyards specialize in the repair of ships of two or three types, whereby naval authorities endeavor to ensure that the facilities of the Atlantic and Pacific fleets have approximately equal handling capabilities. Repair and overhaul of surface units with conventional propulsion plants, up to and including carriers, are handled in Philadelphia and Long Beach, and on nuclear-powered missile and torpedo-armed submarines -- in Portsmouth and Vallejo.

The naval shipyards in Charleston and Pearl Harbor possess the requisite facilities to repair nuclear-powered attack submarines and guided missile ships with conventional propulsion plants.

As noted above, approximately 33.5 percent of all repair and maintenance activities (in dollar terms) for the Navy is handled by privately-owned shipyards. It has been reported in the foreign press that 193 privately-owned shipyards in the United States are authorized to perform such work. In the last two years 43 enterprises have engaged in major overhauls. Repair and overhaul of warships and auxiliary vessels takes from 6 to 12 months (much longer than merchant vessels), while work on warships with nuclear propulsion plants takes even longer. For example, overhaul of the nuclear submarine "Pollack" took 2 years (400,000 man-days) and cost 101.9 million dollars. On the average 833 persons of 30 job specializations were employed on such activities each day. In the period 1979-1980 privately owned shipyards performed repairs on 97 U.S. Navy ships and auxiliary vessels.

Construction of new warships and auxiliary vessels for the Navy is handled only by privately owned shipyards, which have a total of 119 building slips accommodating hulls measuring 145 x 21 meters. More than 2 billion dollars were invested from 1970 through 1980 to modernize this industry.

In 1980 a total of 169,200 persons were employed at privately owned shipyards in the United States, approximately 40 percent of whom (66,000) were employed in the construction, repair and overhaul of naval ships and auxiliary vessels.

There are presently 25 large privately owned shipyards in the United States, enterprises containing not less than one building slip for constructing vessels measuring 145 x 21 meters or more, and with an interest in obtaining contracts to build ships for the Navy. They comprise the nucleus of the U.S. shipbuilding industry. At the beginning of October 1980 they had orders for 408 warships and vessels, including barges, representing a total amount of more than 3.4 billion dollars, more than 1.7 billion of which (51.5 percent) represented the cost of building 48 warships and auxiliary vessels. These same shipyards also perform the bulk of repairs and overhauls done by privately-owned enterprises for the Navy, with an overall volume which has increased from 387 million dollars in 1972 to approximately 1.2 billion in 1981.

Data on the 12 principal U.S. privately owned shipbuilding enterprises which have experience in building warships and auxiliary vessels is contained in the table [not translated] (the number of employees and contracts in hand apply to October 1980).

In addition, 24 other companies, including small companies, perform various work for the Navy. The Boeing Marine Systems shipyard, for example (Renton, Washington) builds "Pegasus" class patrol hydrofoil missileships, Peterson Builders (Sturgeon Bay, Wisconsin) builds patrol gunboats, while Marinette Marine (Marinette, Wisconsin) builds tugs.

The specified shipbuilding programs are being accomplished as follows, listed by types.

Fleet ballistic missile submarines. It has been noted in the foreign press that the production capabilities of the U.S. shipbuilding industry make it possible to build 11-12 SSBNs of various classes each year. The shipyard of the Electric Boat Division of General Dynamics, for example, can build six such boats a year; Newport News Shipbuilding can build two, the Ingalls Shipbuilding Division of Litton Industries can build 1.5-2, and Quincy Shipbuilding Division of General Dynamics can build 1.5-2. At the present time "Ohio" class SSBNs are being built only at the Electric Boat Division shipyard of General Dynamics, where a special facility has been built for this purpose. As of June 1981 this company had a contract to build 8 fleet ballistic missile submarines (SSBN-726-733). The lead boat of the class -- the "Ohio" (SSBN-726) (the contract was signed in July 1974) was 95 percent complete at the beginning of December 1980, and sea trials were conducted in June 1981. This boat, the cost of which rose to 1,291.5 million dollars in the process of construction, was delivered to the Navy in October of this year. It was scheduled to be commissioned in November.

The second boat of this class is scheduled to be delivered in 1982 -- the "Michigan" (SSBN-727) (Figure 1) [not reproduced]. The total number of new SSBNs, in the opinion of foreign experts, could be as many as 25-30 units.

Torpedo-armed nuclear submarines. The United States is continuing to build torpedo-armed nuclear-powered submarines of the "Los Angeles" class. In the period from 1970 through the 1981 fiscal year, funds were appropriated for building 36 SSNs, while in the 1982-1986 fiscal years it is planned to appropriate funds for the construction of an additional 6 boats of this class.

It is planned to have 24 SSNs of the "Los Angeles" class in commission by October 1985 (there were only 15 as of 1 July 1981). They are being built at two civilian shipyards: the Electric Boat Division of General Dynamics, and Newport News Shipbuilding. The Mare Island Naval Shipyard and the Portsmouth Naval Shipyard, as well as Quincy Shipbuilding Division of General Dynamics, Ingalls Shipbuilding Division of Litton Industries, and the New York Shipbuilding Corporation (Camden, New York, no longer in business) also have experience in building SSNs.

The process of designing, engineering and building a modern SSN takes from 12 to 16 years, distributed as follows: 2 to 3 years on determination of performance requirements, specifications and contract terms, 7 to 8 years on design and engineering, and from 3 to 5 years on construction proper, requiring an outlay of approximately 6 million man-hours. It has been noted in the foreign press that the cost of building a "Los Angeles" class SSN increased from 221 million dollars in 1976 to 462 million in 1980 and is continuing to rise.

As of 1 July 1981 the U.S. Navy had 77 SSNs and 5 diesel-powered submarines in commission. U.S. military and political leaders intend to increase the total number of SSNs to 90, which will require, in the estimate of U.S. experts, building 3 to 4 boats a year.

Nuclear-powered aircraft carriers. The third "Chester W. Nimitz" class nuclear carrier, the "Carl Vinson" (CVN-70), is being fitted out at Newport News Shipbuilding. It was 90 percent completed by mid-1981. The cost of building this ship, from the moment the keel was laid in October 1975, has increased from 973 million to 1.3 billion dollars. It is scheduled for commissioning in the first half of 1982.

More than 2 billion dollars was appropriated in the 1980 fiscal year for construction of a fourth carrier of this class -- the CVN-71, the keel of which was laid in November 1981. It is anticipated that it will be commissioned in 1988.

The Reagan Administration has added to the shipbuilding program approved by Congress appropriations for construction of a fifth nuclear carrier of the "Chester W. Nimitz" class -- CVN-72. In the 1982 fiscal year an initial appropriation of 658 million dollars was made for this carrier, with the bulk of the financing scheduled for 1983. Commissioning is anticipated in 1991. The cost of each ship of this class, together with the aircraft it carries (from 85 to 95 units), totals approximately 4 billion dollars.

In addition, U.S. military and political leaders have approved a program of modernization of four carriers of the "Forrestal" class, to extend their service life from 30 to 45-50 years. Modernization of each of these ships requires about two and a half years and 496 million dollars (in 1980 prices). The first to undergo modernization (commenced in October 1980), at the Philadelphia Naval Shipyard, is the "Saratoga" (CV-60), followed by the "Forrestal" (CV-59) (scheduled to begin in the 1983 fiscal year), the "Independence" (CV-62) (in the 1985 fiscal year), and the "Ranger" (CV-61) (in the 1987 fiscal year).

The government is planning in addition to appropriate 372 million dollars in the 1982 fiscal year for refitting and reactivating from reserve status the carrier "Oriskany" (CV-34). Including 1981 fiscal year appropriations for its modernization, more than 500 million dollars will be spent.

Nuclear-powered guided missile cruisers. Construction was completed in 1980 on the fourth nuclear-powered guided missile cruiser of the "Virginia" class. Ships of this class -- the "Virginia" (CGN-38), the "Texas" (CGN-39), the "Mississippi" (CGN-40), and the "Arkansas" (CGN-41), carry two helicopters, two 127 mm universal gun mounts, two launchers for Standard anti-aircraft missiles and ASROC antisubmarine missiles. In the future it is planned to arm them with Tomahawk missiles fired from special or vertical launchers.

Guided missile cruisers. In January 1980 the keel was laid for the guided missile cruiser "Ticonderoga" (CG-47) (Figure 2) [not reproduced], which is the lead unit of a new class of ships armed with the Aegis system. It is noted in the foreign press that the average cost of such a guided missile cruiser, developed on the basis of the destroyer "Spruance," is 850 million dollars. In addition to the Aegis system, armament will include Standard anti-aircraft missiles, Harpoon antiship missiles, the Mk 15 Vulcan-Phalanx 20 mm anti-aircraft artillery system, plus gun mounts.

Appropriations have already been secured for seven of these cruisers. They are being built by the Ingalls Shipbuilding Division of Litton Industries. The lead ship (the class will total 28 units) should be commissioned in 1983.

Guided missile destroyers. Guided missile destroyers of the "Kidd" class have been in construction since 1978 at the Ingalls Shipbuilding Division shipyard of Litton industries. These ships are also based on the destroyer "Spruance." Ships of this class, which include the guided missile destroyers "Kidd" (DDG-993), "Gallahan" (DDG-994), "Scott" (DDG-995), and "Chandler" (DDG-996), carry two launchers for ASROC antisubmarine missiles and Standard II antiaircraft missiles and will also be able to accommodate Harpoon antiship missiles and Tomahawk cruise missiles. The cost of a "Kidd" class guided missile destroyer is approximately 350 million dollars.

In addition, in the 1985 fiscal year funds are to be appropriated for construction of a DDGX class destroyer, which will become the lead unit in a series of 50 ships (each of which will cost 500-550 million dollars).

In addition to building new warships of this class, the U.S. Navy is planning to modernize at the end of the 1980's old guided missile destroyers of the "Coontz" class, beefing up their anti-air capability with a Standard II anti-aircraft missile launcher.

Destroyers. Construction will be completed in 1983 on the 31st (and last) "Spruance" class destroyer (Figure 3) [not reproduced]. Construction began in 1972 at the Ingalls Shipbuilding Division shipyard of Litton Industries. The cost of such a ship is 126.2 million dollars (in 1980 prices).

They carry helicopters (two LAMPS or one Sea King), a launcher for Sea Sparrow missiles, ASROC antisubmarine missiles, two 127 mm universal gun mounts and two three-tube torpedo launchers. Some destroyers (DD-961-973, 975-977, 981, and 988) also carry Harpoon antiship missile launchers.

Guided missile frigates. The United States is continuing to build a large number of "Oliver Hazard Perry" class guided missile frigates (figures 4 and 5) [not reproduced], which carry two LAMPS helicopters, a combination launcher for Harpoon antiship missiles and Standard antiaircraft missiles, a 76 mm universalgun mount, a Vulcan-Phalanx 20 mm antiaircraft artillery system, and two three-tube torpedo launchers. These ships are being built by Bath Iron Works and Todd Pacific Shipyards Corporation (both facilities). The cost of an "Oliver Hazard Perry" class guided missile frigate is 275 million dollars (in 1980 prices). At the beginning of 1981 there were 8 ships of this class in commission. Plans call for a total of 50 "Oliver Hazard Perry" class guided missile frigates to be built at U.S. shipyards for the U.S. Navy, and 4 for the Royal Australian Navy.

Patrol hydrofoil missileships.

In 1977 the patrol hydrofoil missileship "Pegasus" (PHM-1) was built and delivered to the navy. Following its trials, the decision was made to build five more units. The first of these -- the "Taurus" (PHM-3) (Figure 6) [not reproduced] -- was commissioned in 1981, while construction of the remaining

four units should be completed in 1982. They are armed with launchers for Harpoon antiship missiles and an OTO Melara Mk 75 76 mm gun mount. These units are being built at the Boeing Marine Systems shipyard.

Amphibious warfare ships. Construction was completed in May 1980 on a series of five "Tarawa" class multipurpose amphibious warfare ships: the "Tarawa" (LHA-1), the "Saipan" (LHA-2), the "Belleau Wood" (LHA-3), the "Nassau" (LHA-4), and the "Peleliu" (LHA-5). According to reports in the Western press, these ships can carry a 2000-man reinforced Marine battalion, and the helicopters it carries on board can simultaneously helilift 400-500 Marines. Each of these ships, in addition to Sea Knight, Sea Stallion, Sea Cobra, and other helicopters, is armed with two launchers for Sea Sparrow antiaircraft missiles and 3 127 mm universal gun mounts. The cost of building a "Tarawa" class multipurpose amphibious warfare ship was 229 million dollars in 1974 prices.

The shipbuilding program calls for appropriations for construction of three LSD-41 class dock landing ships at the Lockheed Shipbuilding and Construction Company shipyard. They are to replace obsolete ships of the "Thomaston" class of 1954-1957 vintage.

Auxiliary vessels. The U.S. Navy is continuing to devote considerable attention to further growth of the auxiliary fleet and improvement in its quality. Within the next few years the Navy expects the addition of three "Samuel Gompers" class destroyer tenders, the submarine tender ("Makki") (AS-41), 3 AO-177 class tankers, a cable layer, and several tugs.

Plans call for building 14 T-AKX class heavy weapons and combat equipment floating depots by the end of 1987, at a total cost of about 2 billion dollars. Carrying on board heavy weapons, other equipment and provisions, they will be permanently prepositioned in areas of potential employment of the so-called "rapid deployment forces." In addition, the U.S. Navy plans to purchase around the mid-1980's 8 27,000 ton fast containerships, capable of crossing the Atlantic in 4 days. According to a report in the magazine SEA POWER, their acquisition will cut in half the time required to deliver to the Persian Gulf sufficient equipment to supply an armored division. At the present time more than a month is required for this.

As is attested by the foreign press, appropriations for designing and building new combatants and auxiliaries, as well as for modernizing and refitting existing units, have increased in the last decade (1972-1982 fiscal years) from approximately 3 billion to 10.2 billion dollars.

U.S. ruling circles, who have set the goal of achieving military superiority over the Soviet Union, are continuing to escalate the arms race. Escalating militarist preparations, expanding the shipbuilding program and increasing the Navy's fighting strength, they are seeking to escalate U.S. naval presence in virtually every part of the World Ocean and preparation of the U.S. Navy, as was acknowledged by the newspaper WASHINGTON POST, to "carry out offensive operations against the Soviet Union... with the aid of cruise missiles launched from modernized warships."

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239



PERCEPTIONS, VIEWS, COMMENTS

ARTICLES PUBLISHED IN 'FOREIGN MILITARY REVIEW' IN 1981

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 12, Dec 81 (signed to press 10 Dec 81) pp 93-96

[List of articles appearing in ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in 1981]

[Text] Editorial

Under the Party Banner -- Guarding Peace and Socialism	1
Toward New Victories of Communism	2
The 26th CPSU Congress -- Event of World-Historic Significance	3
In the Name of Peace and Progress	4
Imperialism -- Following a Course of Aggression and Adventures	5
Faithfulness to an Internationalist Course	7
Bourgeois Ideology in the Service of the Military	9
In Honor of the 64th Anniversary of the Great October Socialist Revolution -- the Unfading Light of October	10
For Equality, Against a Policy of Imperialist Dictate	11
Decisive Source of the Might of the Soviet Armed Forces	12
General Military Problems	
N. Bystrov -- U.S. Armed Forces	1
T. Belashchenko -- Activation of Ultra-Rightists in the U.S. Armed Forces	1
G. Petrukhin and L. Monin -- Numerical Strength of the Armed Forces of Foreign Countries	1

A. Slobodenko -- The United States: Gambling on a Preventive Nuclear Strike	2
P. Kochukov -- U.S. Intrigues in the Indian Ocean Basin	2
G. Yakovlev -- NATO -- Source of a Threat to Peace and Security of Peoples	2
D. Bel'skiy -- "Psychological Warfare" in Bundeswehr Plans	2
V. Aleksandrov -- Some Questions of NATO Troop Control	3
V. Tikhomirov -- The Role of Chemical Weapons in Contemporary Warfare	3
B. Skoryukov and V. Krys'ko -- Moral-Psychological Training in China's Armed Forces	3
M. Vasil'chenko -- NATO Maneuvers "Autumn Forge-80"	4
V. Krayev -- CIA Ideological Sabotage Against the Socialist Countries	4
A. Kondrat'yev -- NAVSTAR Satellite Navigation System	4
N. Ivlev -- British Armed Forces Exercise "Crusader-80"	5
V. Nebratenko -- The United States: Policy of Aggression and Terror in Central America	5
G. Petrukhin -- UN Forces	5
A. Tarakanov -- Employment of Leaflets in Psychological Operations	5
V. Andreyev -- Italy's Armed Forces	6
V. Tamanskiy -- Automation of Control in the U.S. Armed Forces	6
V. Moskvina -- Organization of Ideological Brainwashing in Japan's Armed Forces	6
I. Vladimirov -- Great Britain's Military Policy	7
V. Khudyakov -- Israel's Armed Forces -- Instrument of Aggression	7
R. Pavlovskiy -- Consideration of the Element of Surprise in Modeling Combat Operations	7
Ye. Markov -- New Military Educational Institution in Spain	7
A. Tsvetkov -- The United States: Counting on Stepping up Espionage	8
N. Uvayskiy -- Ideological Brainwashing in the Bundeswehr	8

V. Tarakanov -- U.S. Psychological Warfare Units and Subunits	8
Ye. Zharkov -- Expansion of Spain's Military Ties With the United States and NATO	8
A. Korablev -- Securing Strategic Mobility	9
N. Bystrov -- Method of Estimating a Nation's Might	9
T. Belashchenko -- The U.S. Marines: Training Murderers	9
B. Skoryukov -- From a Position of Great-Power Chauvinism	9
I. Belov -- "Eurostrategy" and NATO Eurostrategic Nuclear Forces	10
K. Borisov -- Modernization of China's Armed Forces	10
P. Aleksandrov -- Pakistan in U.S. and Chinese Aggressive Plans	10
R. Simonyan -- Trends in Development of U.S. Military Doctrine	11
L. Roshchin -- Symbols of Militarism and Reaction	11
A. Deyev -- The Politico-Military Situation in Southeast Asia	12
A. Vasil'yev -- Belgium's Armed Forces	12
Ye. Zharkov -- Training of Command Cadres in Spain's Armed Forces	12
Ground Forces	
A. Ryzhkov -- Combat Operations in Mountains	1
V. Petrov -- U.S. Army Engineer Subunits	1
Ye. Viktorov -- APCs and IFVs of Foreign Armies	1
N. Mishin -- Antitank Weapons of FRG Ground Forces	1
S. Yegorov -- First Combat Troops School of FRG Armed Forces	1
N. Tsapenko -- The Battalion Task Force in "Active Defense"	2
G. Alksnis -- Ground Reconnaissance in the FRG Army Corps	2
F. Dmitriyev -- The U.S. Army REMBASS System	2
L. Sergakov -- Earth-Moving Equipment of the NATO Nation Armies	2
V. Merenkov -- FRG Ground Forces Exercises	3
N. Fomich -- Weaponry of France's Ground Forces	3

Yu. Korolev and V. Shamshurov -- Engineer Support of Combat Operations in a Built-Up Area	3
A. Aleksandrov -- FRG Ground Forces Ground Reconnaissance Subunits	4
V. Subbotin -- U.S. Army Improved Hawk Antiaircraft Missile Battalion	4
N. Nikolayev -- French Ground Forces Exercises	4
V. Miryanin -- Mortars of Foreign Armies	4
N. Krasov -- Development of Smoke Munitions in the United States	4
N. Mishin -- West German Jaguar Self-Propelled Launchers	4
A. Yegorov -- The U.S. Tank Battalion in the Attack	5
P. Borisov -- Rank and File and Command Personnel of China's Ground Forces	5
G. Alekseyev -- Field Electric Power Sources	5
O. Surov -- The U.S. MLRS (RSZO)	5
S. Pryadilov -- Japan's TAN-SAM Antiaircraft Missile System	5
A. Ryzhkov -- Combat Operations in a Built-Up Area	6
A. Aleksandrov -- Organization of the FRG Motorized Infantry Division	6
P. Mogutov -- U.S. Army Flamethrower-Incendiary Weapons	6
V. Stepanov -- Fuel Supply Equipment	6
N. Ivlev -- Exercise "Sankt Georg"	7
V. Kostin and O. Sidorov -- China's Infantry Division in the Attack	7
Yu. Dmitriyev -- Organization of the FRG Tank Division	7
V. Viktorov -- The U.S. Patriot Antiaircraft Missile System	7
I. Karenin -- Ground Forces Helicopters of the Capitalist Countries	7
V. Aleshchenko -- The FRG Motorized Infantry Division in the Attack	8
K. Borisov -- China's Infantry Battalion	8
N. Fomich -- U.S. Army Antitank Weapons	8
Ye. Klenov -- British Rapier Antiaircraft Missile System	8

V. Yevgen'yev -- Organization of the British Armored Division	9
N. Tsapenko -- Company Task Force in the Attack	9
D. Sokolov -- Evaluating the Effectiveness of Small Arms	9
V. Dmitriyev -- Ground Reconnaissance Radars	9
A. Alekhin -- Motorized Infantry Regiment of the French Army Corps	9
N. Tsapenko -- Combat Operations in the Security Area	10
V. Grankin -- U.S. Army Aviation Command and Control	10
A. Simakov -- French Army Mechanized Regiment	10
I. Romanovskiy -- Ground Forces Pilotless Reconnaissance Drones	10
V. Afinov -- Binocular-Mounted Radio	10
O. Surov -- U.S. M198 Towed 155 mm Howitzer	10
V. Rozanov -- U. S. Development of Heliborne Electro-Optical System	10
A. Ryzhkov -- British Armored Division in the Attack	11
Yu. Korolev and V. Shamshurov -- Engineer Support of Combat Operations in Mountains	11
L. Yakovlev and P. Stuton -- U.S. Army Tropospheric Stations	11
N. Zhukov -- New Antitank Mines	11
O. Surov -- U.S. Cluster Shells	11
A. Yegorov -- U.S. Army Tank Battalion in the Defense	12
G. Dem'yanov -- Views on Organization of U.S. Ground Forces Air Defense	12
V. Chistyakov -- NATO Ground Forces Portable Radio Sets	12
N. Fomich -- Armored Repair and Recovery Vehicles	12
Air Forces	
L. Andreyev -- The F-16 Fighter in Aerial Combat	1
A. Pavlov -- Exercise "Tactical Air Meet-80"	1
K. Osmachev -- The Space Shuttle System	1

A. Stepanov -- The HARM Antiradiation Missile	1
V. Kirsanov -- U.S. Development of the "Stealth Aircraft"	1
V. Yurtsev -- New Wing for Fighters	1
Yu. Belyayev -- Aviation Fuel of the NATO Countries for Gas Turbine Engines	1
V. Aleksandrov -- Fighting Strength of the U.S. Air Force	1
V. Valentinov -- "Rapid Deployment Forces" Aviation at Exercises	2
G. Osipov and N. Kolesnikov -- Testing the F-16 Aircraft in Europe	2
I. Aleksandrov -- Future Development Prospects of Fighter Airborne Radars	2
Yu. Alekseyev -- Aircrew Rescue System	2
V. Yurtsev -- Trainer Version of the A-10A Attack Aircraft	2
V. Petrov -- Twin Hercules Military Transport Aircraft	2
I. Karenin -- Modernization of the F-111 Aircraft	2
V. Sibiryakov -- Fighting Strength of the NATO Nation Air Forces	2
V. Kondrat'yev -- Japan's Air Force	3
V. Valentinov -- Exercise "Paid Redoubt-80"	3
P. Ivanov -- The Tornado Fighter-Interceptor	3
V. Dmitriyev and N. Germanov -- Guided Aircraft Bombs	3
V. Berdov -- The C-X Military Transport Aircraft	3
G. Osipov -- Sealing Off a Tactical Area of Operations	4
V. Plyushev -- U.S. Fighters in NATO Air Defense	4
F. Dmitriyev -- Aircraft Laser Weapon Guidance Systems	4
I. Chistyakov -- The British Hawk Aircraft	4
N. Belkin -- Spain's Air Force	5
D. Valentinov -- The U.S. Air Force 4484th Test Squadron	5
B. Semenov -- Air-to-Surface Tactical Missiles	5

Test Your Knowledge. Aircraft of Capitalist Countries	5
A. Krasnov -- Combat Employment E-3A Aircraft	6
V. Lanovoy -- Improvement of Servicing and Maintenance of Airborne Equipment	6
Yu. Alekseyev -- The U.S. Strike Eagle Aircraft	6
V. Berdov -- Operating C-5A Aircraft from Dirt Strips	6
V. Dmitriyev -- Hypersonic Antitank Missile	6
V. Lunyakin -- Employment of Airborne EW Equipment in the U.S. Air Force	7
P. Ivanov -- Aerial Tankers in the British Air Force	7
S. Alekseyev -- Aerial Cameras of Foreign Countries	7
V. Valentinov -- New Air-to-Air Missile	7
D. Sokolov and A. Danilov -- Mathematical Modeling of Combat Operations in the U.S. Air Force	8
V. Tamanskiy -- Development of a New Recognition/Identification System in NATO Air Forces	8
V. Kirsanov -- Flight Tests on the B-52G Bomber	8
B. Ivanov and G. Isayev -- Swedish Viggen Fighter-Interceptor	8
V. Shturmanov -- Special-Role Aircraft in the Air Forces of Capitalist Countries	8
M. Semenyuk and V. Tarabanov -- Engaging Ground Armored Targets	9
I. Aleksandrov -- British Airborne Radar Early Warning and Control System	9
V. Leskov -- U.S. Aircraft Equipment Storage Center	9
B. Semenov -- New Air-Launched Missile Motors	9
V. Kirsanov -- Completion of Flight Testing of the B-1 Bomber	9
Test Your Knowledge. Aircraft of Capitalist Countries	9
V. Artemov -- Improvement of Great Britain's Air Defense	10
L. Safronov -- Night Air Reconnaissance	10

Yu. Alekseyev -- Future U.S. Fighters	10
Yu. Omel'chenko and B. Babayev -- Automation of Command and Control at Air Force Headquarters	10
Yu. Smirnov -- Rapid Repair of (VPP)	10
V. Grigor'yev -- Theater Tactical Air Operations	11
R. Radomirov -- U.S. Land-Based Cruise Missiles	11
F. Dmitriyev -- Airborne Container-Type ECM Units	11
G. Osipov -- Testing of the All-Weather Version of the A-10 Attack Aircraft	11
V. Pokrovskiy -- The "Global Shield" Exercises	12
N. Belkin -- The Greek Air Force	12
S. Borisov -- Flight Support Radio Navigation Systems	12
P. Ivanov ---F-16XL Fighter Project	12
Naval Forces	
V. Khomenskiy -- NATO Naval Forces at the "Teamwork-80" Exercise	1
V. Vostrov--- Combating Antiship Missiles	1
V. Morozov -- Development of Mine Weapons	1
S. Zhvakov -- Amphibious Assault Vehicles of the NATO Nation Naval Forces	1
V. Afanas'yev -- Destroyers of the FRG Navy	1
A. Korablev -- Ship Strength of the NATO Nation Naval Forces	1
A. Lomov -- The Greek Navy	2
M. Gromov -- The Merchant Marine in Pentagon Plans	2
B. Tyul'pakov -- Development of Surface Situation Surveillance Equipment in the U.S. Navy	2
A. Prostakov -- Submarine Sonar Gear	2
A. Korablev -- Classification of U.S. Naval Ships	2
V. Afanas'yev -- British "Linder" Class Frigates	2



A. Korablev -- Turkish Navy Officer Training	3
V. Krayev -- Potential Employment of "Tarawa" Class Ships in "Rapid Deployment Forces"	3
V. Mosalev -- Combat Swimmers of the FRG Navy	3
Yu. Petrov -- U.S. Navy Torpedo Launching Equipment	3
V. D'yakov and A. Chirkov -- Communications Equipment of the Amphibious Command Ship "Blue Ridge"	3
V. Kozhin and I. Vasin -- China's Naval Forces	4
V. Afanas'yev -- Ships of Foreign Navies	4
M. Mikhaylov -- The Italian Mine Search and Demolition System	4
V. Morozov -- Dutch Antiaircraft Artillery System	4
V. Khomenskiy -- NATO Naval Forces Combat Training in the Atlantic	5
O. Aleksandrov -- Belgium's Naval Forces	5
V. Sukhotskiy -- U.S. Marines Physical Training	5
G. Nikolayenko -- Radio Electronic Equipment of the Atlantic-Mk 4 Aircraft	5
V. Morozov -- Swedish Shipboard 57 mm Gun Mounts	5
A. Frolov -- NATO Channel Command	6
G. Perov -- Development Prospects of British Fleet Ballistic Missile Submarines	6
M. Panin -- Aviation Department Flight Operations Support of Carrier-Based Aircraft	6
Yu. Tuchkov -- Shore-Based Antiship Missile Systems	6
Test Your Knowledge. Destroyers of the NATO Nation Navies	6
R. Dmitriyev -- Future Development Prospects of U.S. Naval Forces Afloat	7
I. Volodin -- France's Naval Aviation	7
G. Nikolayenko -- Aircraft-Operated Sonobuoys	7
P. Ryabov -- U.S. Navy Aircrew Life Support and Survival Equipment	7

M. Mikhaylov -- Subcat Submersible	7
V. Afanas'yev -- British "Sheffield" Class Guided Missile Destroyers	7
O. Aleksandrov -- Denmark's Naval Forces	8
S. Sergeyev -- FRG Naval Forces Future Command and Control System	8
V. Minin and M. Mishin -- Italian Submersibles and Mini-Submarines	8
V. Mikhaylov -- The British Seafan Rocket Decoy System	8
S. Morekhod -- Surface Warships of the Principal Types of the Capitalist Countries	8
M. Panin -- Helicopter Operations from the Decks of U.S. Warships	9
V. Shchedrov and V. Novichkov -- Japanese Naval ASW Aircraft	9
A. Kondrat'yev -- Development of U.S. Satellite Communications Systems	9
V. Afanas'yev -- Frigates of the Navies of the NATO Nations	9
V. Belyakov -- Portugal's Navy	10
R. Shirkholin -- FRG Naval Aviation	10
V. Konstantinov -- Modern Diesel-Powered Submarines of the Navies of the European NATO Countries	10
M. Tsiporukha -- Organization of Servicing and Maintenance in the U.S. Navy	10
A. Khromov -- U.S. Scissor-Wing Aircraft	10
V. Mar'in -- Destroyers of the Japanese Navy	10
V. Belyakov -- Spain's Navy	11
A. Gorbachev -- Navigation System of U.S. Fleet Ballistic Missile Submarines	11
Ye. Nikolayev -- British Seawolf Antiaircraft Missile System	11
M. Mikhaylov -- The U.S. Navy's "Emory S. Land" Class Tender	11
A. Korablev -- Naval Forces Afloat of the NATO Nations	11
V. Ovsyanikov and A. Kolpakov -- Views on Employment of Mines in the Baltic Straits Zone	12
G. Perov -- "Ohio" Class SSBN Logistic Support System in the Pacific	12

I. Kutsev -- The F-18 Hornet Carrier-Based Aircraft	12
N. Viktorov and A. Chirkov -- British Navy Shipboard Weapons Automated Control System	12
S. Morekhod -- Surface Ships of the Principal Types of the Capitalist Nations	12
Military Economics	
V. Gorokhov -- Artillery Armament Production in France	1
A. Kazakov -- U.S. Department of the Army Appropriations in Fiscal 1981	1
A. Starkov -- Spain's Military Industry	2
V. Leskov -- Manufacture of Military Aircraft in Japan	2
A. Gavrilov -- South Africa's Military Industry	3
Ye. Nikolayenko and V. Yefremov -- Financing of NATO Military Preparations	4
V. Afinov -- U.S. Expenditures on Developing ECM Equipment	5
A. Gavrilov -- 1981 Budget of France's Ministry of Defense	6
V. Nikolayev -- Arms Production in Brazil	7
L. Nikolayev -- U.S. Department of Defense Draft Budget for Fiscal 1982	8
N. Nikolayenko and V. Yefremov -- Britain's Military Budget for Fiscal 1981/82	9
S. Zabolotskiy -- Joint Air-Launched Missile Development Programs	10
S. Ivanov -- The United States: Dangerous Business in the Near East	11
V. Grenkov -- Shipbuilding in the United States	12
Infrastructure	
V. Goncharov -- Reorganization of U.S. Civil Defense	1
A. Romanenko -- FRG Maritime Transport and Its Employment for Military Purposes	1
V. Goncharov -- France's Civil Defense	2
V. Andreyev -- Pakistan (Geographic Position, Economy, Infrastructure, Armed Forces)	3

G. Stasov -- Bangor -- Trident SSBN Basing Location	3
Yu. Sedov -- Expansion of the Network of U.S. Military Bases in the Persian Gulf Area	4
A. Luk'yanov -- Egypt (Physical-Geographic Conditions, Political System, Economy, Elements of Infrastructure)	5
K. Petrov -- China's Road System	6
V. Goncharov -- NATO Civil Defense Committee	8
A. Andreyev -- Italy's Seaports	9
A. Luk'yanov -- Controlling Ship Traffic on the Suez Canal	10
A. Lavrent'yev -- U.S. Strategic Petroleum Reserves	11
A. Lukanin -- Building A Canal Between the Mediterranean and the Dead Sea	12
Reports, Events, Facts	
Transatlantic Shipping for NATO Joint Forces. Development of Laser Weapons for U.S. Air Force. Military-Economic Relations Between the United States and Pakistan. The U.S. M60A3 Tank. Forced to Save Fuel. Supplier of Armored Vehicles in Spain. Plans for Development of the Tank of the 1990's by France and the FRG. Israeli "Reshef" Class Guided Missile Patrol Boat. French Super Puma Helicopter. British Marine Transport-Assault Helicopter. U.S. XM797 Practice Shell. New Appointments	1
NATO Naval Forces Exercise "Trident-80." Exercise of the French 11th Infantry Division. The Leopard-2 on the Conveyor. Modernization of the Marder IFV. Aircraft Purchases for the U.S. Air Force. Aurora Aircraft Become Operational. Employment of Super MATRA Missile. British Antiradiation Missile. New Aircraft Engine. Spanish Amphibious Truck. Universal Deck Turret Mount. The Trans-Alaskan Pipeline. New Appointments	2
Italian Destroyers. British Challenger Tank. Weapon Technical Status Monitoring Instrument. Planned Causeway Between Saudi Arabia and Bahrain. New Appointments	3
"Deterrent Force 80/2" NATO Naval Exercise. Portugal's Airborne Troops. U.S. Army Motorized Infantry Company. French AMX-32 Tank. Placement of Running Light on U.S. Aircraft Carriers. Modernization of the F-16 Aircraft. New French Armed Forces Chief of Staff	4

In a Spirit of Hegemonist Pretensions. Italian (Firos-25 RCZO). Cause of Tragedy -- Pilot Error. ARIES System. U.S. Flying Hospital	5
NATO Joint Naval Forces Exercise "Testgate-81." YPR-765 Infantry Fighting Vehicle. Swiss Turretless Tank. Testing the Extender Aircraft. Establishment of a U.S. Air Force Medical Service Reserve. French Mine Clearer. New Appointments in U.S. Armed Forces	6
Build-up of the Military Power of the NATO Eurogroup. The Sinai in the Pentagon's Sights. Control and Communication System of ICBM Systems. French Engineer Vehicle. 1st Fighter Wing Returns to 2d Joint Tactical Air Command. New Mission for Alpha Jet Aircraft. New Appointments in the Armed Forces of the FRG	7
Arms Purchases for Britain's Ground Forces. Military Laser Equipment. U.S. Army Tank Company. British Valiant Tank. Radars for Shore-Based Patrol Aircraft. New Appointments	8
NATO Naval Exercise "Deterrent Force-81/1." First Tornado Aircraft Delivered to Italian Air Force. French Minesweeper. Restoring the Physical Conditioning of Submariners. FRG Ground Forces Communications School. British Airborne ECM Unit	9
Drug Addicts in Military Uniform. Swedish IKV-91 Light Tank. At-Sea Testing of the Naval Crotale Antiaircraft Missile System. Israeli Air-to-Air Missile. Chinook Helicopters Delivered to British Air Force. New U.S. Reconnaissance Aircraft. Modernization of U.S. Marine Mortars. Spain's Minister of Defense	10
Incentives to Increase Militaristic Spirit. More Intensive Flight Operations at Exercises. Modernization of West German Atlantic Aircraft. Argentine TAM Tank. British Portable UHF Radio Set. New Appointments	11
Portugal: Doing the Bidding of the United States and NATO. NATO Mobile Ground Forces Exercise. French Armored Vehicle. Spanish "Descubierta" Class Guided Missile Frigate. New Israeli Fighter. New Appointments	12
COLOR PLATES	
F-16A Fighting Falcon Fighter * Armored Personnel Carriers and Infantry Fighting Vehicles of Foreign Armies * West German "Lufjens" (D-185) Guided Missile Destroyer	1
West German Luchs Combat Reconnaissance Vehicle * CP-140 Aurora Shore-Based Patrol Aircraft of Canada's Air Command * U.S. F-111E Fighter-Bomber * British Frigate "Ajax" (F-114), "Linder" Class	2

French AMX-10 RC Combat Reconnaissance Vehicle * Italian "Intrepido" (D-571) Guided Missile Destroyer * U.S. Amphibious Command Ship "Blue Ridge" (LCC-19) * Japanese F-1 Tactical Fighters	3
Experimental Model of French AMX-32 Tank * British Hawk Light Attack Aircraft * French "Duquesne" (D-603) Guided Missile Destroyer * West German Jaguar-1 Self-Propelled Launcher	4
U.S. Salvo-Fire Rocket System * AJ37 Viggen Fighter-Bombers * Spanish Air Force F-5A Fighter-Bomber * U.S. Nuclear-Powered Guided Missile Cruiser "Arkansas" (CGN-41)	5
YPR-765 Infantry Fighting Vehicle * U.S. Multipurpose Nuclear Carrier "Chester W. Nimitz" (CVN-68) * British Nuclear-Powered Missile-Armed Submarine "Revenge" (S-27) * U.S. KC-10A Extender Aerial Tanker	6
F-15A Eagle Fighter * Helicopters of the Ground Forces of Capitalist Countries * British Guided Missile Destroyer "Birmingham" (D-86)	7
British Rapier-Self-Propelled Antiaircraft Missile System * Special-Purpose Aircraft of the Air Forces of Capitalist Countries * Danish Guided Missile Frigate "Nils Juel" (F-354)	8
British Chieftain-Mark 5 Tank * Guided Missile Frigates of the Navies of the NATO Countries * Nimrod AEW 3 Radar Early Warning and Control Aircraft of the British Air Force	9
Swedish IKV-91 Light Amphibious Tank * Eight-Cell Launcher of the French Naval Crotale Shipboard Antiaircraft Missile System * Italian Submarine "Nazario Sauro" (S-518) * British Air Force Chinook HC-1 Helicopter	10
Argentine TAM Tank * Mobile Launcher for Land-Based Cruise Missile * British Buccaneer-S 2B Light Bomber * British Guided Missile Frigate "Battle-Ax" (F-89)	11
French ERC 90S (Sage) Wheeled Armored Vehicle * U.S. F-18 Hornet Carrier-Based Aircraft * French Air Force KC-135 F Aerial Tanker * Spanish Guided Missile Frigate "Descubierta" (F-31)	12
Foreign Military Chronicle	1-12
Other Materials	
Leningrad Navymen About the Journal	5
Get-Togethers With the Men of the Red-Banner Central Asian Military District	6
Get-Togethers With Men of the Black Sea Fleet	7

COPYRIGHT: "Zarubezhnoye voyennoye obozreniye", 1981

3024

CSO: 1801/239

END